



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 160978

**TO:** Helen Pezzuto  
**Location:** REM 10A29  
**Art Unit :** 1713  
**August 1, 2005**

**Case Serial Number:** 10/670478

**From:** Kathleen Fuller  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

## Search Notes



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:*  Example: 1713  
➤ *Relevant prior art found, search results used as follows:*

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

**Comments:**

Please Expedite - Amended Case  
Van Jagannathan SPG TC 1700  
Access DB# 160978  
7/29/05 SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Helen Perez Examiner #: 70058 Date: 7/29/05  
Art Unit: 1713 Phone Number 302-1108 Serial Number: 10/670,470  
Mail Box and Bldg/Room Location: RCM-10429 Results Format Preferred (circle): PAPER  DISK  E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: See ATTACHED

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Cntr

Inventors (please provide full names): ↓

JUL 29 RECD

Earliest Priority Filing Date: 9/26/02

Pat. & T.M. Office

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Claims 1-35, 72-89 elected/under consideration

(1) Search for a "block" polymer/copolymer (attached) containing a "1<sup>st</sup> block" selected from monomers defined in Cls 4 or Cl. 10 or Cl. 15. (3embodiments)

(2) search for a nanomer embodiment of "block polymer" defined in Cl. 16, wherein "1<sup>st</sup> block" is defined in Cls 19-22 & species in Cl. 23; wherein the "2<sup>nd</sup> block" is defined in Cls 29-32.

(3) search elected block polymer species in Ex. 1 → poly(methyl methacrylate/ acrylic acid/methyl acrylate)

Key words

block polymer/copolymer, Tg/glass transition temp.  
polydispersity, molecular weight, water-insoluble.

Many thanks!

\*\*\*\*\*  
STAFF USE ONLY

Searcher: X Fuller

Type of Search

NA Sequence (#)

Vendors and cost where applicable

STN

Searcher Phone #:

AA Sequence (#)

Dialog

Searcher Location:

Structure (#)

Qwestel/Orbit

Date Searcher Picked Up:

Bibliographic

Dr. Link

Date Completed: 8/1/05

Litigation

Lexis/Nexis

Searcher Prep & Review Time: 40

Fulltext

Sequence Systems

Clerical Prep Time:

Patent Family

WWW/Internet

Online Time: 100

Other

Other (specify)

=> FILE REG

FILE 'REGISTRY' ENTERED AT 11:51:17 ON 01 AUG 2005  
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STRUCTURE FILE UPDATES: 29 JUL 2005 HIGHEST RN 857722-60-2  
DICTIONARY FILE UPDATES: 29 JUL 2005 HIGHEST RN 857722-60-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLU

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FILE COVERS 1907 - 1 Aug 2005 VOL 143 ISS 6  
FILE LAST UPDATED: 31 Jul 2005 (20050731/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE L30

L9 310239 SEA FILE=REGISTRY ABB=ON PACR/PCT  
 L11 75720 SEA FILE=REGISTRY ABB=ON L9 AND 3/NC  
 L14 48289 SEA FILE=REGISTRY ABB=ON L11 NOT 46.150.18/RID  
 L16 44419 SEA FILE=REGISTRY ABB=ON L14 NOT 1.30.1/RID  
 L17 35664 SEA FILE=REGISTRY ABB=ON L16 NOT (PM/PCT OR OTHER/PCT OR  
 PUR/PCT)  
 L18 31845 SEA FILE=REGISTRY ABB=ON L17 NOT SALT  
 L19 28735 SEA FILE=REGISTRY ABB=ON L18 NOT (1-20/P, SI)  
 L20 44470 SEA FILE=HCAPLUS ABB=ON L19  
 L23 801 SEA FILE=HCAPLUS ABB=ON L20 (L) (BLOCK? OR TRIBLOCK?)  
 L24 79 SEA FILE=HCAPLUS ABB=ON L23 AND (TG OR GLASS TRANSITION)  
 L25 15377 SEA FILE=HCAPLUS ABB=ON L20 (L) PREP/RL  
 L26 57 SEA FILE=HCAPLUS ABB=ON L24 AND L25  
 L27 12 SEA FILE=HCAPLUS ABB=ON L26 AND COSMETIC?/SC, SX  
 L28 12 SEA FILE=HCAPLUS ABB=ON L24 AND COSMETIC?/SC, SX  
 L29 10 SEA FILE=HCAPLUS ABB=ON L26 AND COS/RL  
 L30 12 SEA FILE=HCAPLUS ABB=ON (L27 OR L28 OR L29)

=> D L30 1-12 BIB ABS IND HITSTR

L30 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:570793 HCAPLUS  
 DN 143:83218  
 TI Cosmetic compositions comprising a dispersion of particles of a graft  
 ethylenic polymer and a film-forming agent  
 IN Blin, Xavier; Jager Lezer, Nathalie  
 PA L'Oreal, Fr.  
 SO PCT Int. Appl., 201 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005058274	A1	20050630	WO 2004-IB4127	20041210
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	WO 2004055080	A2	20040701	WO 2003-FR303712	20031212
	WO 2004055080	A3	20040812		
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 WO 2004055081 A2 20040701 WO 2003-FR303713 20031212  
 WO 2004055081 A3 20040805  
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 WO 2004055082 A2 20040701 WO 2003-FR303714 20031212  
 WO 2004055082 A3 20040910  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
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 FR 2863707 A1 20050617 FR 2003-51108 20031218  
 FR 2863493 A1 20050617 FR 2004-50540 20040318  
 PRAI WO 2003-FR3712 A 20031212  
 WO 2003-FR3713 A 20031212  
 WO 2003-FR3714 A 20031212  
 FR 2004-50540 A 20040318  
 US 2004-556063P P 20040325  
 FR 2002-15737 A 20021212  
 FR 2002-15738 A 20021212  
 FR 2002-15739 A 20021212  
 WO 2003-FR3708 A 20031212  
 AB The present invention relates to a cosmetic composition comprising a dispersion of particles of a grafted ethylenic polymer in a liquid fatty phase, and a film-forming agent. The film-forming agent may be soluble or dispersible in the said liquid fatty phase. The composition may contain an aqueous phase, in which case the film-forming agent may be soluble or dispersible in the aqueous phase. A subject of the invention is also the use of a combination of such a grafted ethylene polymer and of a film-forming agent to improve the staying power and/or the transfer resistance of the the composition on keratin materials.  
 IC ICM A61K007-48  
 ICS C08L051-00; C08F290-02; C08K003-34  
 CC 62-4 (Essential Oils and Cosmetics)  
 ST cosmetic dispersion ethylenic polymer film former  
 IT Resins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Manila elemi; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)  
 IT Polysiloxanes, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (acrylic, graft; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)  
 IT Polyurethanes, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(acrylic; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Resins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(copals; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Alopecia

Antioxidants

Cosmetics

Dammar

Dandruff

Dyes

Gelation agents

Glass transition temperature

Gums and Mucilages

Hair preparations

Odor and Odorous substances

Perfumes

Pigments, nonbiological

Preservatives

Propellants (sprays and foams)

Sequestering agents

Solubility

Stabilizing agents

Sunscreens

Surfactants

Thickening agents

(cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Alcohols, biological studies

DNA

Glycosaminoglycans, biological studies

Hydrocarbon oils

Keratins

Lipids, biological studies

Mucopolysaccharides, biological studies

Polyamides, biological studies

Polyesters, biological studies

Polysiloxanes, biological studies

Polyureas

Polyurethanes, biological studies

Proteins

Shellac

Trace elements, biological studies

Vitamins

Waxes

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Metals, biological studies

RL: COS (Cosmetic use); DEV (Device component use); BIOL

(Biological study); USES (Uses)

(cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics

(creams; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics

(emulsions; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(eye makeups; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(gels; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Acrylic polymers, biological studies  
Polyolefins  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(graft; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Keratins  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hydrolyzates; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(lipsticks; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(mascaras; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(mousses; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(nail lacquers; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyesters, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyamide-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyamides, biological studies  
Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyester-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyether-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyoxyalkylene-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyoxyalkylenes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polysiloxane-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyurea-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polyureas  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyurethane-; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics  
(powders; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Polymerization

(radical; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Resins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(sandarac; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Acrylic polymers, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(siloxane-, graft; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Proteins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(soybean; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics

(sprays; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT Cosmetics

(sticks; cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, MethAcrylic acid, esters, polymers 107-51-7, Octamethyltrisiloxane 141-62-8, Decamethyltetrasiloxane 540-97-6, Dodecamethylcyclohexasiloxane 541-02-6, Decamethylcyclopentasiloxane 556-67-2, Octamethylcyclotetrasiloxane 1398-61-4, Chitin 1873-90-1, Heptamethylhexyltrisiloxane 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-36-6, Karaya gum 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl alcohol) 9003-07-0, Polypropylene 9003-17-2, Polybutadiene 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9003-77-4, Poly(2-ethylhexyl acrylate) 9004-32-4 9004-34-6D, Cellulose, derivs. 9004-58-4, Ethyl hydroxyethyl cellulose 9004-61-9, Hyaluronic acid 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-67-5, Methyl cellulose 9005-12-3, Methylphenylsilanediol homopolymer, SRU 9005-32-7, Alginic acid 9007-28-7, Chondroitin sulfate 9010-79-1, Ethylene-propylene copolymer 9011-16-9, Maleic anhydride-methyl vinyl ether copolymer 9012-76-4, Chitosan 9016-00-6, Polydimethylsiloxane 11138-66-2D, Xanthan, derivs. 17955-88-3, Heptamethyloctyltrisiloxane 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25087-34-7, 1-Butene-Ethylene copolymer 25609-89-6, Crotonic acid-vinyl acetate copolymer 26246-92-4, Poly(dodecyl acrylate) 31230-04-3, Methylphenylsilanediol homopolymer 31807-55-3, Isododecane 31900-57-9, Polydimethylsiloxane 34464-38-5, Isodecane 51987-20-3, VinylCaprolactam-vinylpyrrolidone copolymer 60908-77-2, Isohexadecane 195868-36-1, Phenyl trimethicone 288087-49-0, Kraton Liquid L 1253 850321-51-6, Butylene-ethylene-2-methyl-1-propene copolymer 854262-19-4 854262-20-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT 2116-84-9P, Dow Corning 556 56266-37-6P 704890-57-3P 717133-99-8P,

Butylene-ethylene-styrene triblock copolymer 848601-63-8P,

2-Ethylhexyl acrylate-Isobornyl acrylate-isobornyl methacrylate block copolymer 855779-77-0P, Isobornyl acrylate-isobornyl

methacrylate block copolymer 855786-20-8P, Versagel M 5960

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

IT 848601-63-8P, 2-Ethylhexyl acrylate-Isobornyl acrylate-isobornyl

methacrylate block copolymer

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (cosmetic compns. comprising dispersion of particles of graft ethylenic polymer and film-forming agent)

RN 848601-63-8 HCAPLUS

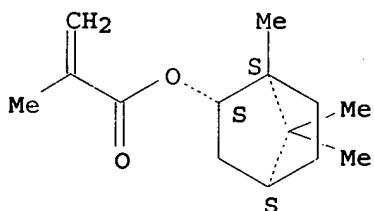
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 7534-94-3

CMF C14 H22 O2

Relative stereochemistry.

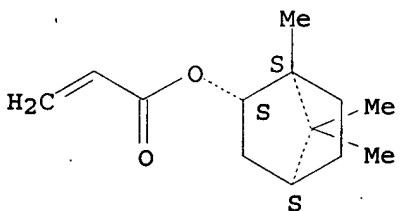


CM 2

CRN 5888-33-5

CMF C13 H20 O2

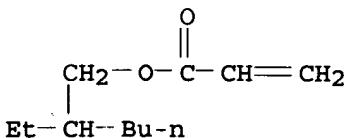
Relative stereochemistry.



CM 3

CRN 103-11-7

CMF C11 H20 O2



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2005:300212 HCAPLUS  
DN 142:360350  
TI Cosmetic composition comprising a tensioning agent and a particular block ethylenic polymer for topical application on the skin  
IN Vicic, Marco; Cassin, Guillaume  
PA L'oreal, Fr.  
SO PCT Int. Appl., 66 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005030158	A1	20050407	WO 2004-EP52270	20040922
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2860156	A1	20050401	FR 2003-11338	20030926

PRAI FR 2003-11338 A 20030926  
US 2003-508313P P 20031006

AB The present invention relates to a cosmetic composition adapted for a topical application on the skin, especially an anti-wrinkle composition in a medium compatible with the skin. Specifically, the composition comprises at least one tensioning agent, the said tensioning agent being present in a content ranging from 0.01% to 20% relative to the total weight of the composition; and

at least one non-elastomeric, water-in soluble film-forming linear block ethylenic polymer, the said polymer being present in a content ranging from 0.01% to 20% relative to the total weight of the composition. This composition

makes it possible to give a remanent tensioning effect to the skin to which it is applied.

IC ICM A61K007-48

CC 62-4 (Essential Oils and Cosmetics)

ST cosmetic tensioning agent block ethylenic polymer topical antiwrinkle skin

IT Dispersion (of materials)

(aqueous, of mineral colloidal particle; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Polymers, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(block, ethylenic, non-elastomeric, water-insol. film-forming; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Minerals, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(colloidal particle; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Acrylic polymers, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(copolymer; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Colloids  
Cosmetics  
Emulsions  
Glass transition temperature  
Microparticles  
Skin  
(cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Polysiloxanes, biological studies  
Silicates, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Polydispersity  
(index; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Cosmetics  
(makeups; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Waxes  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(microparticle; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Fillers  
(mineral; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Polymers, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(natural; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Bleaching  
(of skin, prevention of; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Latex  
Microgels  
(plant; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polymer, copolymer; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Embryophyta  
(protein; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Skin  
(stratum corneum; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Drug delivery systems  
(topical; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT Cosmetics  
(wrinkle-preventing; cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT 7631-86-9, Colloidal silica, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(colloidal; cosmetic composition comprising tensioning agent and particular

block ethylenic polymer for topical application on skin)

IT 80-62-6, Methyl methacrylate 97-86-9, Isobutyl(meth)acrylate 97-88-1, n-Butyl methacrylate 4513-36-4, Neopentyl acrylate 7534-94-3, Isobornyl (meth)acrylate 9003-21-8, Methyl acrylate homopolymer 9003-77-4, 2-Ethylhexyl acrylate homopolymer 25322-25-2, (Methyl methacrylate Acrylic acid)copolymer 26776-13-6D, Isophthalic acid polymer, sulfonated 27155-22-2 67290-25-9, (Isobornyl acrylate/methyl methacrylate)copolymer 93858-83-4 102359-43-3 118643-51-9 302328-53-6, (Isobornyl acrylate/isobutyl methacrylate)copolymer 848838-00-6

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT 676542-28-2P 676542-29-3P 676542-30-6P  
676546-89-7P 676597-60-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

IT 103-11-7, 2-Ethylhexyl acrylate 5888-33-5, Isobornyl acrylate 13052-09-0, 2,5-Bis(2-ethylhexanoylperoxy)-2,5-dimethylhexane 31807-55-3, Isododecane

RL: RCT (Reactant); RACT (Reactant or reagent) (cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

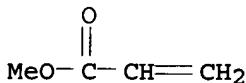
IT 27155-22-2 102359-43-3

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

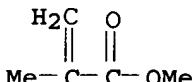
RN 27155-22-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 96-33-3  
CMF C4 H6 O2

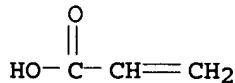
CM 2

CRN 80-62-6  
CMF C5 H8 O2

CM 3

CRN 79-10-7

CMF C3 H4 O2



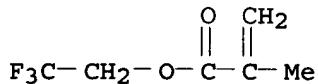
RN 102359-43-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-propenoic acid and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 352-87-4

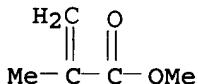
CMF C6 H7 F3 O2



CM 2

CRN 80-62-6

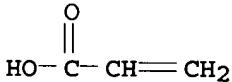
CMF C5 H8 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



IT 676542-28-2P 676542-29-3P 676542-30-6P

676546-89-7P 676597-60-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cosmetic composition comprising tensioning agent and particular block ethylenic polymer for topical application on skin)

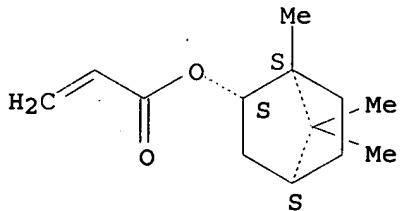
RN 676542-28-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

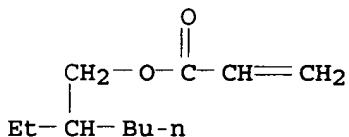
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

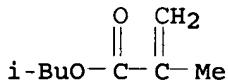
Relative stereochemistry.



CM 2

CRN 103-11-7  
CMF C11 H20 O2

CM 3

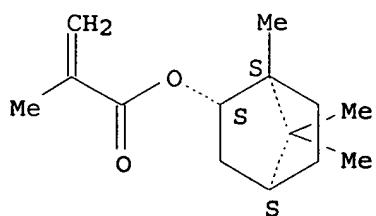
CRN 97-86-9  
CMF C8 H14 O2

RN 676542-29-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-ethylhexyl 2-propenoate and  
 rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 7534-94-3  
CMF C14 H22 O2

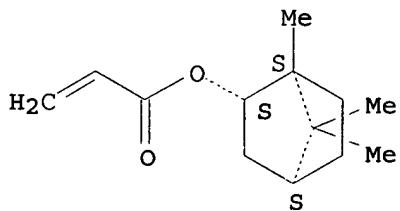
Relative stereochemistry.



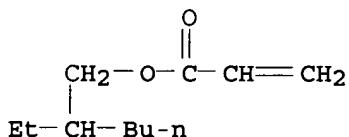
CM 2

CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 3

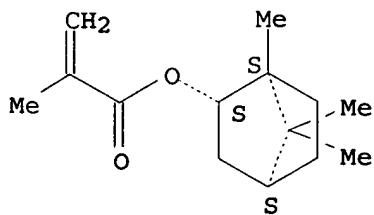
CRN 103-11-7  
CMF C11 H20 O2

RN 676542-30-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX  
 NAME)

CM 1

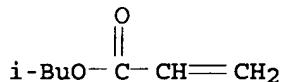
CRN 7534-94-3  
CMF C14 H22 O2

Relative stereochemistry.



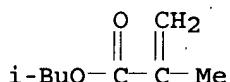
CM 2

CRN 106-63-8  
CMF C7 H12 O2



CM 3

CRN 97-86-9  
CMF C8 H14 O2



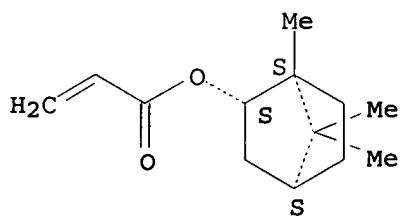
RN 676546-89-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

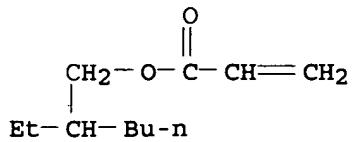
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



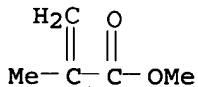
CM 2

CRN 103-11-7  
 CMF C11 H20 O2



CM 3

CRN 80-62-6  
 CMF C5 H8 O2

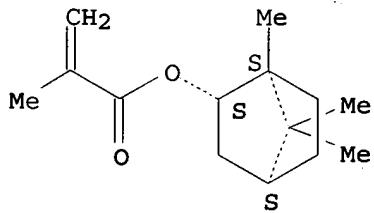


RN 676597-60-7 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-methylpropyl 2-propenoate and  
 rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 7534-94-3  
 CMF C14 H22 O2

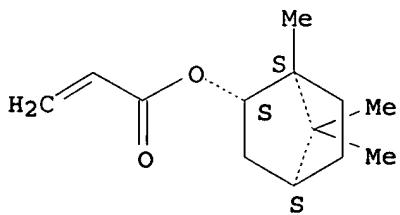
Relative stereochemistry.



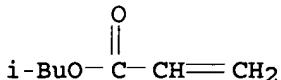
CM 2

CRN 5888-33-5  
 CMF C13 H20 O2

Relative stereochemistry.



CM 3

CRN 106-63-8  
CMF C7 H12 O2RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:300209 HCAPLUS  
 DN 142:360349  
 TI Continuous aqueous phase-based photoprotectant composition containing block polymers having different **glass transition** temperatures  
 IN Seyler, Nathalie; Candau, Didier  
 PA L'oreal, Fr.  
 SO PCT Int. Appl., 86 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English  
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005030155	A1	20050407	WO 2004-EP10989	20040915
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FR 2860155	A1	20050401	FR 2003-11308	20030926
PRAI FR 2003-11308	A	20030926		
US 2003-516759P	P	20031104		

AB Photoprotectant compns. comprise, in a continuous aqueous phase-based carrier:  
 (a) 1 photoprotectant system capable of screening out UV radiation; (b) a block polymer comprising 1 first block and 1 s block which are incompatible with each other and which have different **glass**

transition temps. (Tg), the first and second blocks being linked to each other by an intermediate segment comprising 1 monomer constituting the first block and 1 monomer constituting the second block and the polymer having a polydispersity value of  $V \geq 2$ . The invention also relates to the use of a block polymer as defined above in a photoprotectant composition comprising, in a continuous aqueous phase-based carrier, 1 photoprotectant system capable of screening out UV radiation, as agent making it possible to increase the sun protection factor (SPF) of the the composition. The preparation of block and copolymers is disclosed.

IC ICM A61K007-42

CC 62-4 (Essential Oils and Cosmetics)

Section cross-reference(s) : 37

ST glass transition temp block polymer photoprotectant

IT Surfactants

(amphoteric; continuous aqueous phase-based photoprotectant composition containing

block polymers having different glass transition temps.)

IT Surfactants

(anionic; continuous aqueous phase-based photoprotectant composition containing

block polymers having different glass transition temps.)

IT Infection

(bacterial; continuous aqueous phase-based photoprotectant composition containing

block polymers having different glass transition temps.)

IT Polymers, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(block, diblock; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Surfactants

(cationic; continuous aqueous phase-based photoprotectant composition containing

block polymers having different glass transition temps.)

IT Anti-inflammatory agents

Antibacterial agents

Antifoaming agents

Antioxidants

Cosmetics

Glass transition temperature

Hair

Hair preparations

Humectants

Inflammation

Insect repellents

Molecular weight distribution

Nail (anatomical)

Opacifiers

Perfumes

Pigments, nonbiological

Polydispersity

Preservatives

Propellants (sprays and foams)

Skin

Stabilizing agents

Sunscreens

Suntanning agents  
Thickening agents  
UV A radiation  
UV B radiation  
(continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Oxides (inorganic), biological studies  
Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(creams; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(emollients; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(emulsions; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(gels; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Radicals, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(lipsticks; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(mousses; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(nail lacquers; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Surfactants  
(nonionic; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(sprays; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Cosmetics  
(sticks; continuous aqueous phase-based photoprotectant composition containing block

polymers having different glass transition temps.)

IT Sunscreens  
 (sun protection factor; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT Surfactants  
 (zwitterionic; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT 180898-37-7, Disodium phenyldibenzimidazoletetrasulfonate  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Disodium phenyldibenzimidazoletetrasulfonate; continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT 51-17-2D, Benzimidazole, derivs. 69-72-7D, Salicylic acid, derivs.  
 76-22-2D, Camphor, derivs. 95-14-7D, Benzotriazole, derivs. 100-42-5D, Styrene, alkyl derivs., dimers 106-99-0D, Butadiene, diaryl derivs., dimers 118-60-5, 2-Ethylhexyl Salicylate 118-92-3D, Anthranilic acid, derivs. 119-61-9D, Benzophenone, derivs. 120-46-7D, Dibenzoylmethane, derivs. 131-57-7, Benzophenone-3 150-13-0D, p-Aminobenzoic acid, derivs. 584-45-2D, Benzalmalonic acid, derivs. 606-84-8D,  $\beta$ , $\beta$ -Diphenylacrylic acid, derivs. 621-82-9D, Cinnamic acid, derivs. 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1317-70-0, Anatase 1317-80-2, Rutile 1332-37-2, Iron oxide, biological studies 4065-45-6, Benzophenone-4 5466-77-3 6197-30-4, Uvinul N539 6628-37-1, Benzophenone-5 9003-77-4, 2-Ethylhexyl acrylate homopolymer 11129-18-3, Cerium oxide 12654-97-6D, Triazine, derivs. 13463-67-7, Titanium oxide, biological studies 27503-81-7, PhenylbenzimidazoleSulfonic Acid 28299-33-4D, Imidazoline, derivs. 36861-47-9, 4-Methylbenzylidene camphor 39350-44-2D, Methylenebis(benzotriazole), derivs. 70356-09-1, Parsol 1789 88122-99-0, Ethylhexyltriazone 92761-26-7, Mexoryl SX 154702-15-5, DiethylhexylButamidoTriazole 155633-54-8, Mexoryl XL 191419-26-8, Anisotriazine 302776-68-7, n-Hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate 363602-15-7, 1,1-Dicarboxy(2,2'-dimethylpropyl)-4,4-diphenylbutadiene 848859-96-1, 2-Ethylhexyl acrylate-isobornyl acrylate-methyl methacrylate block copolymer  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT 540-97-6P, Dow Corning 246 27155-22-2P, Acrylic acid-methyl acrylate-methyl methacrylate copolymer 29035-74-3P, Butyl acrylate-Butyl methacrylate copolymer 102359-43-3P 120964-16-1P, Acrylic acid-methyl methacrylate block copolymer 145687-02-1P, Pemulen TR 2 149341-87-7P, Acrylic acid-methyl acrylate-methyl methacrylate block copolymer 676542-28-2P 676542-31-7P 848601-62-7P, 2-Ethylhexyl acrylate-Isobornyl acrylate-isobutyl methacrylate block copolymer 848838-01-7P, Acrylic acid-isobornyl acrylate-methyl acrylate copolymer 848859-98-3P, Isobornyl acrylate-methyl methacrylate block copolymer 848860-00-4P, Isobornyl acrylate-Isobutyl methacrylate block copolymer 848860-08-2P, Acrylic acid-isobornyl acrylate-methyl acrylate block copolymer 848950-23-2P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

IT 33507-63-0, Substance P 83652-28-2, CGRP  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; continuous aqueous phase-based photoprotectant composition containing

block polymers having different glass transition temps.)

IT 848859-96-1, 2-Ethylhexyl acrylate-isobornyl acrylate-methyl methacrylate block copolymer

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(continuous aqueous phase-based photoprotectant composition containing block polymers having different glass transition temps.)

RN 848859-96-1 HCPLUS

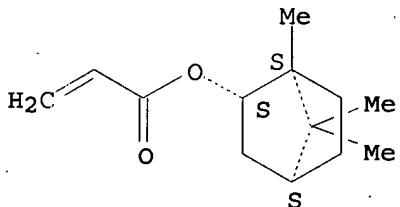
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 5888-33-5

CMF C13 H20 O2

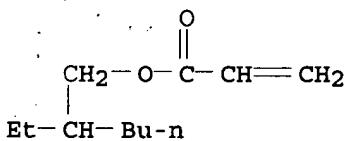
Relative stereochemistry.



CM 2

CRN 103-11-7

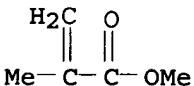
CMF C11 H20 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IT 27155-22-2P, Acrylic acid-methyl acrylate-methyl methacrylate copolymer 102359-43-3P 149341-87-7P, Acrylic acid-methyl acrylate-methyl methacrylate block copolymer

676542-28-2P 676542-31-7P 848601-62-7P,  
 2-Ethylhexyl acrylate-Isobornyl acrylate-isobutyl methacrylate  
 block copolymer 848838-01-7P, Acrylic acid-isobornyl  
 acrylate-methyl acrylate copolymer 848860-08-2P, Acrylic  
 acid-isobornyl acrylate-methyl acrylate block copolymer  
 848950-23-2P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (continuous aqueous phase-based photoprotectant composition containing block  
 polymers having different glass transition temps.)

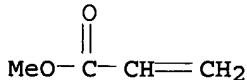
RN 27155-22-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl  
 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 96-33-3

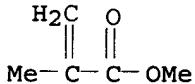
CMF C4 H6 O2



CM 2

CRN 80-62-6

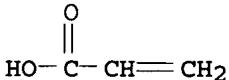
CMF C5 H8 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



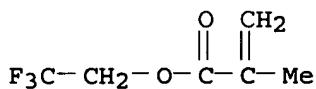
RN 102359-43-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-propenoic acid  
 and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

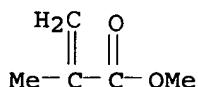
CRN 352-87-4

CMF C6 H7 F3 O2



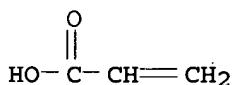
CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

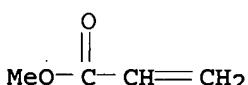
CRN 79-10-7  
CMF C3 H4 O2



RN 149341-87-7 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

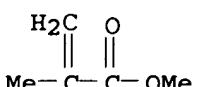
CM 1

CRN 96-33-3  
CMF C4 H6 O2



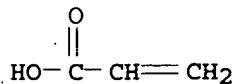
CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

CRN 79-10-7  
 CMF C3 H4 O2

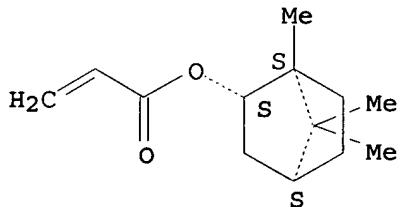


RN 676542-28-2 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

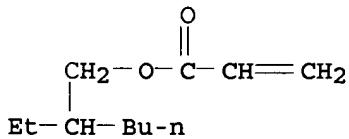
CRN 5888-33-5  
 CMF C13 H20 O2

Relative stereochemistry.



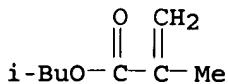
CM 2

CRN 103-11-7  
 CMF C11 H20 O2



CM 3

CRN 97-86-9  
 CMF C8 H14 O2



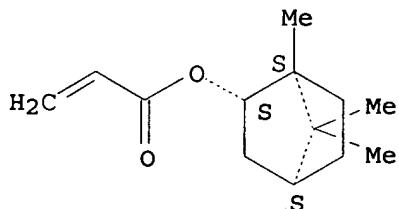
RN 676542-31-7 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-

trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

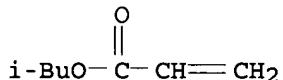
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

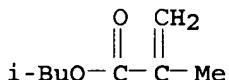
Relative stereochemistry.



CM 2

CRN 106-63-8  
CMF C7 H12 O2

CM 3

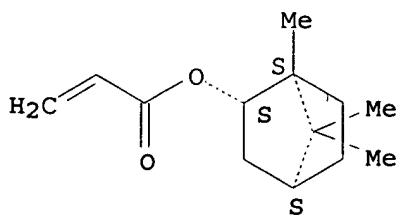
CRN 97-86-9  
CMF C8 H14 O2

RN 848601-62-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX  
 NAME)

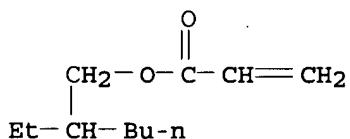
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

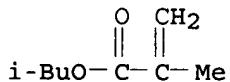
Relative stereochemistry.



CM 2

CRN 103-11-7  
CMF C11 H20 O2

CM 3

CRN 97-86-9  
CMF C8 H14 O2

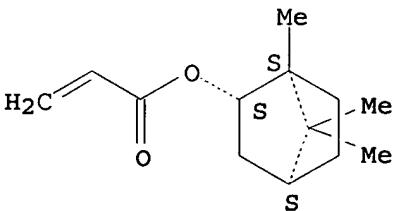
RN 848838-01-7 HCAPLUS

CN 2-Propenoic acid, polymer with methyl 2-propenoate and  
rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
(CA INDEX NAME)

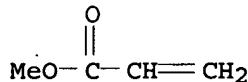
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

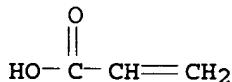
Relative stereochemistry.



CM 2

CRN 96-33-3  
CMF C4 H6 O2

CM 3

CRN 79-10-7  
CMF C3 H4 O2

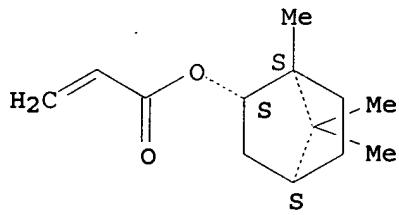
RN 848860-08-2 HCPLUS

CN 2-Propenoic acid, polymer with methyl 2-propenoate and  
rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block  
(9CI) (CA INDEX NAME)

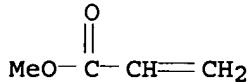
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.

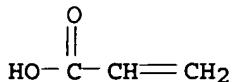


CM 2

CRN 96-33-3  
CMF C4 H6 O2

CM 3

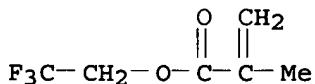
CRN 79-10-7  
 CMF C3 H4 O2



RN 848950-23-2 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-propenoic acid and 2,2,2-trifluoroethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

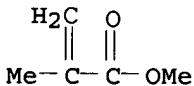
CM 1

CRN 352-87-4  
 CMF C6 H7 F3 O2



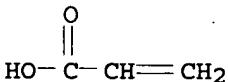
CM 2

CRN 80-62-6  
 CMF C5 H8 O2



CM 3

CRN 79-10-7  
 CMF C3 H4 O2



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 4 OF 12 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:280710 HCPLUS  
 DN 142:360338  
 TI Continuous-aqueous-phase photoprotective composition containing a polymer comprising at least two blocks incompatible with one another, and having different glass transition temperatures  
 IN Seyler, Nathalie; Candau, Didier  
 PA L'oreal, Fr.

SO Fr. Demande, 36 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2860155	A1	20050401	FR 2003-11308	20030926
	WO 2005030155	A1	20050407	WO 2004-EP10989	20040915
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI FR 2003-11308 A 20030926  
US 2003-516759P P 20031104

AB A sunscreen composition comprises in a physiol. acceptable support with continuous aqueous phase: (a) a sunscreen able to filter a UV radiation, (b) at least a block copolymer comprising at least a first block and at least a second block incompatible with each other and having different glass transition temps. The first and second block are connected by an intermediate segment including at least a monomer constitutive of the first block and at least a monomer constitutive of the second block and the polymer having an index of polydispersity I equal to or higher than 2. Formulation of a sunscreen composition containing iso-Bu methacrylate-isobornyl acrylate-ethyl-2-hexyl acrylate copolymer (preparation given) is disclosed. The sun protection factor of the sunscreen was 23.

IC ICM A61K007-42

CC 62-4 (Essential Oils and Cosmetics)  
Section cross-reference(s): 35, 38ST photoprotectant sunscreen acrylic polymer block glass  
transition temp

IT Glass transition temperature

Sunscreens

UV radiation

(continuous-aqueous-phase photoprotective composition containing polymer comprising

at least two blocks incompatible with one another, and having different  
glass transition temps.)

IT Acrylic polymers, biological studies

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)

(continuous-aqueous-phase photoprotective composition containing polymer comprising

at least two blocks incompatible with one another, and having different  
glass transition temps.)

IT 27155-22-2P 29035-74-3P 676542-28-2P

676542-31-7P 676546-89-7P 848838-00-6P

848838-01-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)

(continuous-aqueous-phase photoprotective composition containing polymer comprising

at least two blocks incompatible with one another, and having

different glass transition temps.)  
 IT 27155-22-2P 676542-28-2P 676542-31-7P  
 676546-89-7P 848838-01-7P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (continuous-aqueous-phase photoprotective composition containing polymer  
 comprising

at least two blocks incompatible with one another, and having  
 different glass transition temps.)

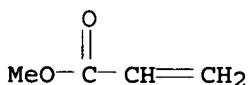
RN 27155-22-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl  
 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 96-33-3

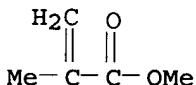
CMF C4 H6 O2



CM 2

CRN 80-62-6

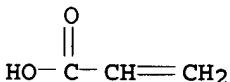
CMF C5 H8 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



RN 676542-28-2 HCAPLUS

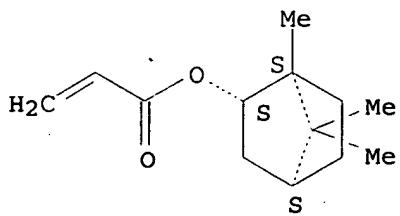
CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 5888-33-5

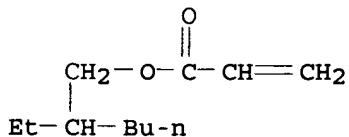
CMF C13 H20 O2

Relative stereochemistry.



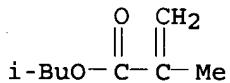
CM 2

CRN 103-11-7  
CMF C11 H20 O2



CM 3

CRN 97-86-9  
CMF C8 H14 O2

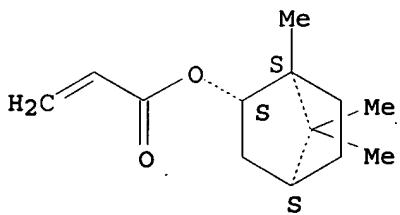


RN 676542-31-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

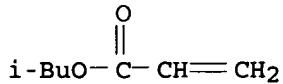
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



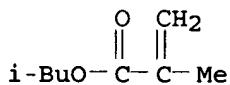
CM 2

CRN 106-63-8  
 CMF C7 H12 O2



CM 3

CRN 97-86-9  
 CMF C8 H14 O2

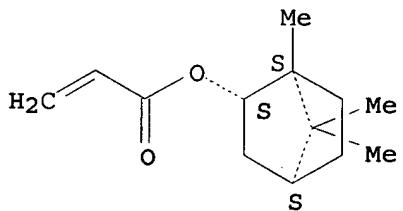


RN 676546-89-7 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

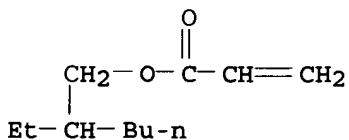
CRN 5888-33-5  
 CMF C13 H20 O2

Relative stereochemistry.



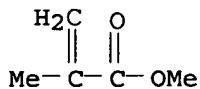
CM 2

CRN 103-11-7  
 CMF C11 H20 O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2

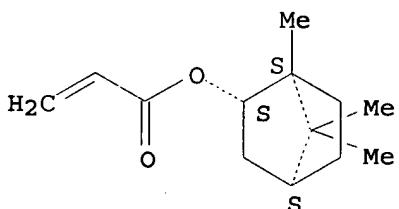


RN 848838-01-7 HCPLUS  
CN 2-Propenoic acid, polymer with methyl 2-propenoate and  
rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

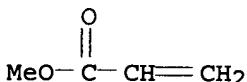
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



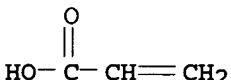
CM 2

CRN 96-33-3  
CMF C4 H6 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 5 OF 12 HCPLUS COPYRIGHT 2005 ACS on STN

KATHLEEN FULLER EIC 1700 REMSON 4B28 571/272-2505

AN 2005:275238 HCAPLUS  
 DN 142:341454  
 TI Cosmetic compositions comprising a block polymer and a nonvolatile silicone oil  
 IN Blin, Xavier; Ferrari, Veronique  
 PA L'oreal, Fr.  
 SO Eur. Pat. Appl., 29 pp.  
 CODEN: EPXXDW

DT Patent  
 LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1518535	A1	20050330	EP 2004-292212	20040915
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	FR 2860143	A1	20050401	FR 2003-11337	20030926
	JP 2005104979	A2	20050421	JP 2004-278479	20040924
	US 2005106197	A1	20050519	US 2004-949435	20040927
PRAI	FR 2003-11337	A	20030926		
	US 2004-539351P	P	20040128		

AB Cosmetic compns. comprising an ethylene block polymer and a nonvolatile silicone oil is claimed. A lipstick contained ethyl-2-hexyl acrylate-isobornyl acrylate-isobornyl methacrylate copolymer (preparation given) 50%, isododecane 65, hydrogenated polyisobutylene 2.1, octyldodecanol 0.9, Dow Corning-556C 27.8, Antaron V220 1.2, and pigment 3 g.

IC ICM A61K007-027  
 ICS A61K007-021

CC 62-4 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 35, 38

ST lipstick polymer nonvolatile silicone oil

IT Fats and Glyceridic oils, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Calophyllum; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Alcohols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (C16-22; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Polysiloxanes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Ph, 556C; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Fats and Glyceridic oils, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (almond; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Fats and Glyceridic oils, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (apricot seed; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Fats and Glyceridic oils, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (arara nut; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

IT Fats and Glyceridic oils, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (avocado; cosmetic compns. comprising block polymer and nonvolatile silicone oil)

- IT Alopecia
  - Antioxidants
    - Glass transition temperature
    - Gums and Mucilages
    - Hair
      - Hair preparations
      - Perfumes
      - Preservatives
      - Propellants (sprays and foams)
      - Sequestering agents
      - Sunscreens
      - Surfactants
      - Thickening agents
        - (cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Canola oil
  - Castor oil
  - Corn oil
  - Cottonseed oil
  - Jojoba oil
  - Olive oil
  - Palm oil
  - Paraffin oils
  - Soybean oil
  - Sunflower oil
  - Vitamins
  - Waxes
- RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Polysiloxanes, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (di-Me, di-Ph; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Polysiloxanes, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (fluoro; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Fats and Glyceridic oils, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (grape seed; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Cosmetics
  - (lipsticks; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Fats and Glyceridic oils, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (mink; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Polysiloxanes, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (polyoxyalkylene-; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Polyoxyalkylenes, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (polysiloxane-; cosmetic compns. comprising block polymer and nonvolatile silicone oil)
- IT Fats and Glyceridic oils, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
    - (sesame; cosmetic compns. comprising block polymer and nonvolatile

silicone oil)

IT Plastics, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (thermoplastics; cosmetic compns. comprising block polymer and  
 nonvolatile silicone oil)

IT Fats and Glyceridic oils, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (turtle; cosmetic compns. comprising block polymer and nonvolatile  
 silicone oil)

IT 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid,  
 biological studies 60-33-3, Linoleic acid, biological studies  
 107-51-7, Octamethyltrisiloxane 110-27-0, Isopropyl myristate  
 111-01-3, Squalane 112-80-1, Oleic acid, biological studies 112-85-6,  
 Behenic acid 123-95-5, Butyl stearate 141-62-8,  
 Decamethyltetrasiloxane 142-91-6, Isopropyl palmitate 463-40-1,  
 Linolenic acid 540-97-6, Dodecamethyl-cyclohexasiloxane 541-02-6,  
 Decamethylcyclopentasiloxane 544-63-8, Myristic acid, biological studies  
 556-67-2, Octamethylcyclotetrasiloxane 1873-90-1, Heptamethyl-  
 hexyltrisiloxane 2915-57-3, 2-Ethylhexyl succinate 6938-94-9,  
 DiIsopropyl adipate 9002-88-4, Ethylene polymer 9003-27-4D,  
 Polyisobutylene, hydrogenated 9005-12-3, Phenyltrimethicone 9016-00-6,  
 Polydimethyl siloxane 13052-09-0, Trigonox 141 17955-88-3,  
 Heptamethyloctyltrisiloxane 22766-83-2, 2-Octyldodecyl myristate  
 26942-95-0, Glycerin triisostearate 28211-18-9, Antaron V220  
 29226-39-9D, trimethylsilyl-terminated 29806-73-3, 2-Ethylhexyl  
 palmitate 30399-84-9, Isostearic acid 31807-55-3, Isododecane  
 31900-57-9, Polydimethylsiloxane 32243-66-6,  
 Diphenylmethyldiphenyltrisiloxane 34316-64-8, Hexyl laurate  
 34362-27-1, 2-Hexyldecyl laurate 34464-38-5, Isodecane 42131-25-9,  
 Isononyl isononanoate 57568-20-4, 2-Octyldodecyl lactate 60908-77-2,  
 Isohexadecane 81230-05-9, Diisostearyl malate 120486-24-0, DiGlycerin  
 triisostearate 134112-33-7, 2-Octyldodecyl palmitate 195868-36-1,  
 Phenyltrimethicone  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (cosmetic compns. comprising block polymer and nonvolatile silicone  
 oil)

IT 676542-29-3P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (cosmetic compns. comprising block polymer and nonvolatile  
 silicone oil)

IT 676542-29-3P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (cosmetic compns. comprising block polymer and nonvolatile  
 silicone oil)

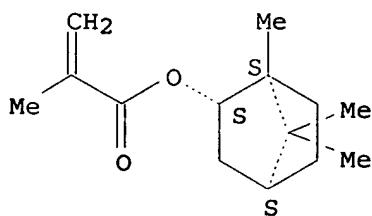
RN 676542-29-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-  
 2-yl ester, rel-, polymer with 2-ethylhexyl 2-propenoate and  
 rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 7534-94-3  
 CMF C14 H22 O2

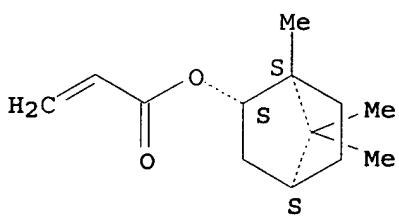
Relative stereochemistry.



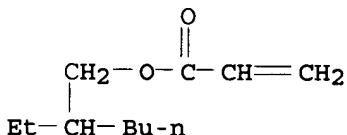
CM 2

CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 3

CRN 103-11-7  
CMF C11 H20 O2RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:275237 HCAPLUS  
 DN 142:341453  
 TI Bilayered cosmetic product containing a film-forming block copolymer and  
 kit-of-parts containing this product  
 IN Blin, Xavier; Ferrari, Veronique  
 PA L'oreal, Fr.  
 SO Eur. Pat. Appl., 41 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 1518534	A2	20050330	EP 2004-292148	20040907	
	EP 1518534	A3	20050706			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR					
	FR 2860142	A1	20050401	FR 2003-11340	20030926	
	JP 2005126417	A2	20050519	JP 2004-278480	20040924	
	US 2005095213	A1	20050505	US 2004-949448	20040927	

PRAI FR 2003-11340 A 20030926  
US 2004-539353P P 20040128

AB The invention relates to a cosmetic product containing a first and a second composition, the first composition comprising, in a cosmetically acceptable organic

liquid medium, at least one film-forming linear ethylenic block polymer, and the second composition comprising a cosmetically acceptable medium. The invention also relates to a makeup process and to a makeup kit containing the said product. This product is in particular a lipstick, a mascara or a nail varnish. For example, a block copolymer was prepared from 120 g of isobornyl acrylate, 90 g of iso-Bu methacrylate, and 90 g of 2-ethylhexyl acrylate in isododecane, using 2,5-bis(2-ethylhexanoylperoxy)-2,5-dimethylhexane (Trigonox 141) and 1.2 g of 2,5-bis(2-ethylhexanoylperoxy)-2,5-dimethylhexane catalysts. A polymer comprising a poly(isobornyl acrylate-iso-Bu methacrylate) first block with a Tg of 80°, a poly(2-ethylhexyl acrylate) second block with a Tg of -70°, and an intermediate block which is an isobornyl acrylate/isobutyl methacrylate/2-ethylhexyl acrylate random polymer was obtained. The polymer has a weight average mass of 77,000 and a number average mass of

19,000, i.e., a polydispersity index I of 4.05. A lip gloss was prepared containing the polymer prepared 90.7%, hydrogenated polyisobutene 2.1%, octyldodecanol 0.9%, Ph trimethicone (DC 556, 20 CST) 2.1%, vinylpyrrolidone-1-eicosene copolymer (Antaron V-220) 1.2%, and pigments 3%.

IC ICM A61K007-021  
ICS A61K007-043

CC 62-4 (Essential Oils and Cosmetics)  
Section cross-reference(s): 37

ST acrylic block polymer film former bilayered cosmetic

IT Polysiloxanes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(SF 1642; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Beeswax

Dyes

Pearlescent pigments

Pigments, nonbiological

(bilayered cosmetics containing film-forming ethylenic block polymers)

IT Carnauba wax

Hydrocarbon oils

Paraffin waxes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics

(bilayered; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics

(concealers; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Polysiloxanes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(di-Me, fluoroalkyl Me, X 22-819; bilayered cosmetics containing

film-forming ethylenic block polymers)

IT Cosmetics  
(eye liners; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(eye shadows; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(foundations; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Jojoba oil  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hydrogenated; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Paraffin oils  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(isoparaffin oils, Parleam; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(lipsticks; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(makeups; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(mascaras; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Cosmetics  
(nail lacquers; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Glass transition temperature  
(of polymers; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Candelilla wax  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(reaction products with silicones; bilayered cosmetics containing film-forming ethylenic block polymers)

IT Polyolefins  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(waxes; bilayered cosmetics containing film-forming ethylenic block polymers)

IT 205537-77-5  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(D 2-9085; bilayered cosmetics containing film-forming ethylenic block polymers)

IT 56266-37-6, Allyl stearate-vinyl acetate copolymer  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(Mexomere PQ; bilayered cosmetics containing film-forming ethylenic block polymers)

IT 77-90-7, Tributyl acetyl citrate 2116-84-9, DC 556 4568-28-9,  
Triethanolamine stearate 5281-04-9, D And C Red 7 Lake 8047-99-2  
9002-88-4 9003-27-4D, Polyisobutene, hydrogenated 9003-29-6,  
Polybutene 9004-70-0, Nitrocellulose 9016-00-6, Polydimethylsiloxane  
12227-89-3, Black iron oxide 12691-60-0, Bentone 27V 26246-91-3,  
Polyvinyl laurate 28211-18-9, Antaron V 220 31692-79-2, Dimethiconol  
31900-57-9, Polydimethylsiloxane 34513-50-3, Octyldodecanol  
42557-10-8, DC 200  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(bilayered cosmetics containing film-forming ethylenic block polymers)

IT 149341-87-7P, Acrylic acid-methyl acrylate-methyl methacrylate

block copolymer 848601-62-7P, 2-Ethylhexyl acrylate-isobornyl acrylate-isobutyl methacrylate block copolymer 848601-63-8P, 2-Ethylhexyl acrylate-isobornyl acrylate-isobornyl methacrylate block copolymer 848601-64-9P, Isobornyl methacrylate-isobutyl acrylate-isobutyl methacrylate block copolymer 848601-65-0P, Isobornyl acrylate-isobornyl methacrylate-isobutyl acrylate block copolymer 848601-66-1P, Isobornyl acrylate-isobutyl acrylate-isobutyl methacrylate block copolymer  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of film-forming linear ethylenic block polymers for bilayered cosmetics)

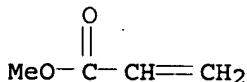
IT 9005-25-8, Starch, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (rice; bilayered cosmetics containing film-forming ethylenic block polymers)

IT 149341-87-7P, Acrylic acid-methyl acrylate-methyl methacrylate block copolymer 848601-62-7P, 2-Ethylhexyl acrylate-isobornyl acrylate-isobutyl methacrylate block copolymer 848601-63-8P, 2-Ethylhexyl acrylate-isobornyl acrylate-isobornyl methacrylate block copolymer 848601-64-9P, Isobornyl methacrylate-isobutyl acrylate-isobutyl methacrylate block copolymer 848601-65-0P, Isobornyl acrylate-isobornyl methacrylate-isobutyl acrylate block copolymer 848601-66-1P, Isobornyl acrylate-isobutyl acrylate-isobutyl methacrylate block copolymer  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of film-forming linear ethylenic block polymers for bilayered cosmetics)

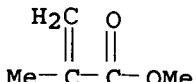
RN 149341-87-7 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

CM 1

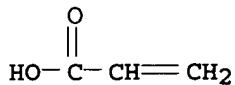
CRN 96-33-3  
CMF C4 H6 O2

CM 2

CRN 80-62-6  
CMF C5 H8 O2

CM 3

CRN 79-10-7  
CMF C3 H4 O2

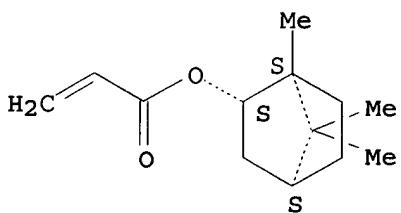


RN 848601-62-7 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

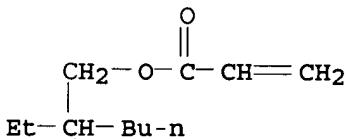
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



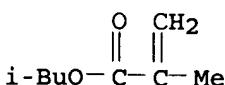
CM 2

CRN 103-11-7  
CMF C11 H20 O2



CM 3

CRN 97-86-9  
CMF C8 H14 O2



RN 848601-63-8 HCPLUS

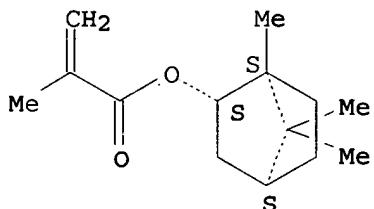
KATHLEEN FULLER EIC 1700 REMSON 4B28 571/272-2505

CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 7534-94-3  
CMF C14 H22 O2

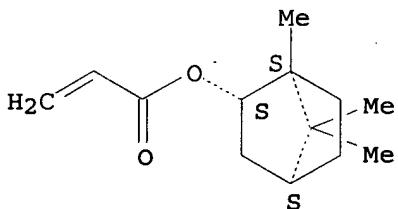
Relative stereochemistry.



CM 2

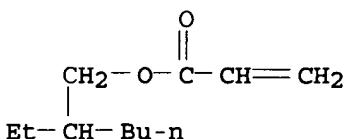
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 3

CRN 103-11-7  
CMF C11 H20 O2



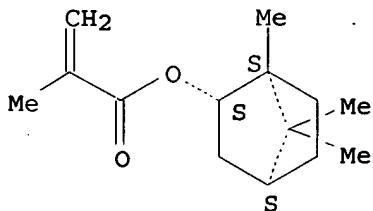
RN 848601-64-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

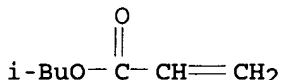
CM 1

CRN 7534-94-3  
CMF C14 H22 O2

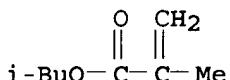
Relative stereochemistry.



CM 2

CRN 106-63-8  
CMF C7 H12 O2

CM 3

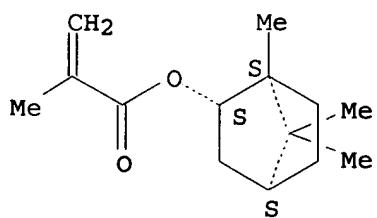
CRN 97-86-9  
CMF C8 H14 O2

RN 848601-65-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methylpropyl ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate; block (9CI) (CA INDEX NAME)

CM 1

CRN 7534-94-3  
CMF C14 H22 O2

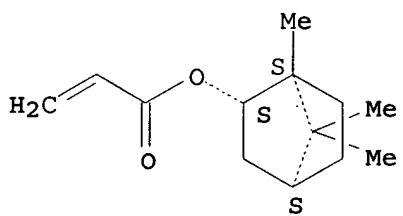
Relative stereochemistry.



CM 2

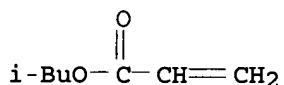
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 3

CRN 106-63-8  
CMF C7 H12 O2

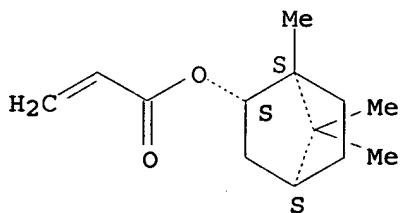


RN 848601-66-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, block (9CI) (CA INDEX  
NAME)

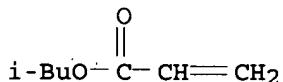
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

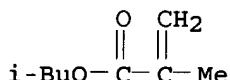
Relative stereochemistry.



CM 2

CRN 106-63-8  
CMF C7 H12 O2

CM 3

CRN 97-86-9  
CMF C8 H14 O2

L30 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:819900 HCAPLUS

DN 141:319540

TI Amphiphilic block copolymer compositions and cosmetics containing them

IN Hiwata, Tomoaki; Shibata, Minako; Nishizawa, Satoru; Miura, Kaori

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 59 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004277300	A2	20041007	JP 2003-68119	20030313
PRAI JP 2003-68119		20030313		

AB Title compns., useful for hair, nail, or skin cosmetics, contain linear block copolymers showing Mn 1.0 + 103-1.0 + 106, Mw/Mn  $\leq 2.5$ , and  $\leq 1$  Tg or m.p. and contain ethylenically unsatd. monomer units and hydrophilic blocks CH<sub>2</sub>CR<sub>1</sub>CO<sub>2</sub>M (R<sub>1</sub> = H, Me; M = H, basic compound residue; all M  $\neq$  H) manufactured by atom-transfer radical polymerization using transition metal complex redox catalysts, initiators having radically transferring atoms or atomic groups, and solvents showing dielec. constant (at 25°) 1.50-2.10. The compns. are easily rinsed out with

H2O. A shampoo containing 2-ethylhexyl acrylate-tert-Bu acrylate diblock copolymer hydrolyzate K salt was formulated.

IC ICM A61K007-00  
ICS A61K007-021; A61K007-04; A61K007-06; A61K007-075; A61K007-08; A61K007-11; C08F004-40; C08F008-44; C08F246-00; C08F297-00; C08L101-00

CC 62-4 (Essential Oils and Cosmetics)  
Section cross-reference(s): 35

ST amphiphilic block copolymer cosmetic radical polymn; shampoo polyacrylate block polymn catalyst initiator; solvent polymn amphiphilic block copolymer cosmetic

IT Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(amino-containing; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Polymerization catalysts  
(atom transfer, radical, transition metal complexes; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Polymerization  
(atom transfer, radical; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Cosmetics  
Hair preparations  
Shampoos  
(cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Polyoxyalkylenes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(di-Me polysiloxane-, SH 3771; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(di-Me, polyoxyalkylene-, SH 3771; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Solvents  
(for polymerization; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Amine oxides  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polymers; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Transition metal complexes  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalysts; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(polymerization solvents; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 42557-10-8, BY 11-007  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(SH 200-200CS, BY 11-007; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 9003-39-8, Luviskol K 90 25086-89-9, Luviskol VA 64 25136-75-8,

Merquat Plus 3330 31900-57-9D, Dimethylsilanediol homopolymer, trimethylsilyl-terminated 55008-57-6, Gafquat 755N 58748-38-2, Resyn 28-2930 67724-93-0, GantrezES 225 70801-07-9, Amphomer 28-4910 81859-24-7, UCARE Polymer JR 400 87435-36-7, Yukaformer Amphoset 136372-47-9, Yukaformer AM 75R205S 143711-48-2, SM 8702C 150104-73-7, Yukaformer SM 172305-96-3, Diahold LP 503  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 26316-49-4DP, N,N-Dimethylaminoethyl methacrylate-stearyl methacrylate copolymer, oxidized 118037-65-3DP, oxidized 723342-48-1DP, tert-Butyl acrylate-2-ethylhexyl acrylate triblock copolymer, hydrolyzed, potassium salts 725241-58-7DP, hydrolyzed, potassium salts  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 7787-70-4, Copper(I) bromide 7789-45-9, Copper(II) bromide  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization catalyst; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 868-73-5, Dimethyl 2,6-dibromoheptanedioate 2052-01-9, 2-Bromoisobutyric acid  
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (polymerization initiator; cosmetics containing amphiphilic block copolymers and optional other polymers)

IT 58748-38-2, Resyn 28-2930  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (cosmetics containing amphiphilic block copolymers and optional other polymers)

RN 58748-38-2 HCAPLUS

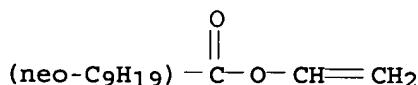
CN Neodecanoic acid, ethenyl ester, polymer with 2-butenoic acid and ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 51000-52-3

CMF C12 H22 O2

CCI IDS



CM 2

CRN 3724-65-0

CMF C4 H6 O2

Me — CH = CH — CO<sub>2</sub>H

CM 3

CRN 108-05-4  
CMF C4 H6 O2

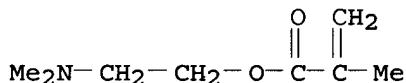
IT 118037-65-3DP, oxidized

RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(cosmetics containing amphiphilic block copolymers and optional  
other polymers)

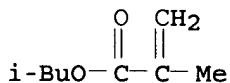
RN 118037-65-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with  
methyl 2-methyl-2-propenoate and 2-methylpropyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

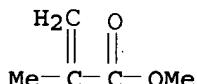
CM 1

CRN 2867-47-2  
CMF C8 H15 N O2

CM 2

CRN 97-86-9  
CMF C8 H14 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2L30 ANSWER 8 OF 12 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:290487 HCPLUS

DN 140:309002

TI Cosmetic composition comprising a block polymer and a film-forming agent  
IN Blin, Xavier; De La Poterie, Valerie; Ferrari, Veronique

*applicants*

PA L'oreal, Fr.  
 SO PCT Int. Appl., 81 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004028487	A2	20040408	WO 2003-FR2849	20030926
	WO 2004028487	A3	20040729		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1411069	A2	20040421	EP 2003-292382	20030926
	EP 1411069	A3	20040714		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	EP 1421928	A2	20040526	EP 2003-292383	20030926
	EP 1421928	A3	20040714		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004149772	A2	20040527	JP 2003-336449	20030926
	CN 1504488	A	20040616	CN 2003-164966	20030926
	US 2004120906	A1	20040624	US 2003-670388	20030926
	US 2004120920	A1	20040624	<u>US 2003-670478</u>	<u>20030926</u>
	BR 2003003890	A	20040908	BR 2003-3890	20030926
	BR 2003003891	A	20040908	BR 2003-3891	20030926
	JP 2004269497	A2	20040930	JP 2003-336450	20030926
	EP 1545442	A2	20050629	EP 2003-798231	20030926
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	FR 2002-11949	A	20020926		
	FR 2002-16437	A	20021220		
	FR 2003-6121	A	20030521		
	WO 2003-FR2849	W	20030926		

AB The invention relates to a cosmetic composition comprising, in a cosmetically-acceptable organic liquid medium, at least one film-forming linear ethylene block polymer and another film-forming agent. The aforementioned film-forming agent can be dissolved or dispersed in the organic liquid medium. The inventive composition can contain an aqueous phase, in which case the film-forming agent can be dissolved or dispersed in the aqueous phase. The invention also relates to the way in which the combination of one such block polymer and a film-forming agent can be used to improve the performance of said composition on keratinous materials. A lipstick contained ethyl-2-hexyl acrylate-isobornyl acrylate-isobornyl methacrylate copolymer (preparation given) 50.0, silica 5.0, isododecane gelled by ethylene-propylene-styrene copolymer and butylene-ethylene-styrene copolymer (Versagel MD 970) 7.0, hydrogenated polyisobutene 2.1, octyldodecanol 0.9, phenyltrimethicone 2.1, 1-eicosene-vinylpyrrolidone copolymer 1.2, pigments 3, and fragrance q.s. 100%.

IC ICM A61K007-02  
 ICS A61K007-42; C08F265-06

CC 62-4 (Essential Oils and Cosmetics)

Section cross-reference(s): 38

ST cosmetic block polymer film forming agent

IT Polysiloxanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(Me Ph; cosmetic composition comprising block polymer and film-forming agent)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(acrylates; cosmetic composition comprising block polymer and film-forming agent)

IT Polymers, biological studies  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(block; cosmetic composition comprising block polymer and film-forming agent)

IT Glass transition temperature

Hair preparations

Sunscreens  
(cosmetic composition comprising block polymer and film-forming agent)

IT Polyamides, biological studies

Polyesters, biological studies

Polysiloxanes, biological studies

Polyureas  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

IT Glass, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

IT Metals, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

IT Polyesters, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(epoxy; cosmetic composition comprising block polymer and film-forming agent)

IT Cosmetics  
(lipsticks; cosmetic composition comprising block polymer and film-forming agent)

IT Cosmetics  
(makeups; cosmetic composition comprising block polymer and film-forming agent)

IT Cosmetics  
(mascaras; cosmetic composition comprising block polymer and film-forming agent)

IT Polyesters, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyamide-; cosmetic composition comprising block polymer and film-forming agent)

IT Epoxy resins, biological studies

Polyamides, biological studies

Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyester-; cosmetic composition comprising block polymer and film-forming agent)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyether-; cosmetic composition comprising block polymer and film-forming agent)

IT Polyurethanes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(polyurea-; cosmetic composition comprising block polymer and film-forming agent)

IT Polyureas

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyurethane-; cosmetic composition comprising block polymer and film-forming agent)

IT Plastics, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(thermoplastics; cosmetic composition comprising block polymer and film-forming agent)

IT Polyurethanes, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(vinyl group-containing; cosmetic composition comprising block polymer and film-forming agent)

IT 9000-01-5, Gum arabic 9004-34-6D, Cellulose, cationic, biological studies 9005-12-3, Poly[oxy(methylphenylsilylene)] 9016-00-6, Polydimethylsiloxane 31900-57-9, Polydimethylsiloxane 57271-36-0, Butylene-ethylene-styrene copolymer 676619-29-7, Versagel MD 970

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

IT 676542-29-3P 676542-30-6P 676546-89-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

IT 676542-29-3P 676542-30-6P 676546-89-7P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cosmetic composition comprising block polymer and film-forming agent)

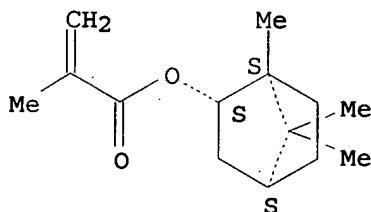
RN 676542-29-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-ethylhexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 7534-94-3  
CMF C14 H22 O2

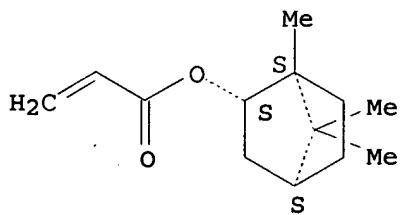
Relative stereochemistry.



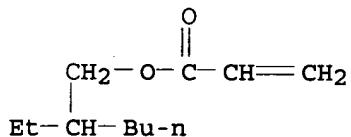
CM 2

CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 3

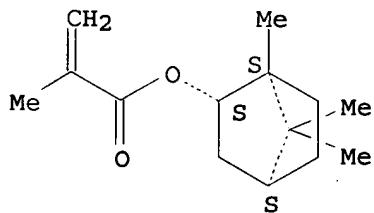
CRN 103-11-7  
CMF C11 H20 O2

RN 676542-30-6 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with  
 2-methylpropyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX  
 NAME)

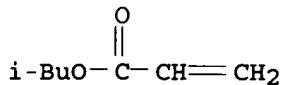
CM 1

CRN 7534-94-3  
CMF C14 H22 O2

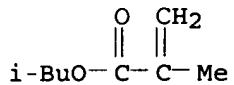
Relative stereochemistry.



CM 2

CRN 106-63-8  
CMF C7 H12 O2

CM 3

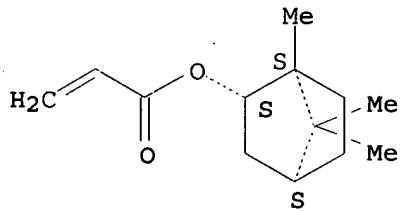
CRN 97-86-9  
CMF C8 H14 O2

RN 676546-89-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl  
 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl  
 2-propenoate (9CI) (CA INDEX NAME)

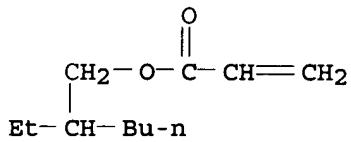
CM 1

CRN 5888-33-5  
CMF C13 H20 O2

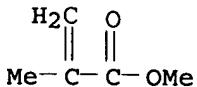
Relative stereochemistry.



CM 2

CRN 103-11-7  
CMF C11 H20 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

L30 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:484855 HCAPLUS  
 DN 137:51995  
 TI Branched/block copolymers for treatment of keratinous substrates  
 IN Galleguillos, Ramiro; Smith, David J.; Constantino, Steven A.; Hasman, Daniel F., Jr.  
 PA PMD Holdings Corp., USA  
 SO U.S., 29 pp., Cont.-in-part of U.S. Ser. No. 223,664.  
 CODEN: USXXAM

DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6410005	B1	20020625	US 2000-594321	20000615
	WO 2000040628	A1	20000713	WO 1999-US30790	19991222
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2412260	AA	20011220	CA 2000-2412260	20000622
	WO 2001096429	A1	20011220	WO 2000-US17161	20000622
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	EP 1290050	A1	20030312	EP 2000-941637	20000622
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	BR 2000015897	A	20030506	BR 2000-15897	20000622
	JP 2004503626	T2	20040205	JP 2002-510561	20000622
PRAI	US 1998-223664	A2	19981230		
	WO 1999-US30790	A2	19991222		
	US 2000-594321	A	20000615		
	WO 2000-US17161	W	20000622		
AB	A block copolymer for hair styling compns. includes hydrophilic and hydrophobic blocks which allow for optimization of desirable characteristics of the hair styling composition, such as flow onto the hair, prevention of curl droop, style retention at high humidity, tack, hardness, resistance to flaking, restylability, volumizing, and washability from the hair. The copolymer includes a polyacrylate backbone of hydrophobic blocks, with hydrophilic acrylate side chains. The copolymer is suitable for the formulation of a number personal care, household, hair care, skin care and other formulation. The copolymer is suited to incorporation into low volatile organic compound (VOC) hydro-alc. hair styling compns. to meet reduced VOC regulations. The block copolymers of the present invention unexpectedly improve the cleaning efficiency and effectiveness of a shampoo formulation. This enables the formulator to use lesser amts. of the surfactants and to use milder				

surfactants but still maintain an unusually high degree of oil and dirt removal capability. For example, allyl methacrylate-Bu acrylate-methacrylic acid block copolymer was prepared using tert-Bu peroxy pivalate (Lupersol-11) as a polymerization initiator and iso-Pr alc./water

(80:20) as a solvent. The copolymer prepared was formulated into an aerosol hair spray containing SD 40-200 alc. 25.0%, water 35.0%, the block copolymer 8.0%, aminomethyl propanol (AMP-95) 2.0%, and di-Me ether 30.0%. Upon discharging the product, the spray pattern was excellent, a very fine aerosol mist was obtained.

IC A61K007-06; A61K007-11; A61K007-00; A61K009-00; A61L009-04

INCL 424070100

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 35, 63

ST acrylic block copolymer hair styling prepns

IT Shaving preparations

(aftershave, gels; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Polymerization

Polymerization catalysts

(block, radical; preparation of film-forming branched/block copolymers for hair styling prepns. and other uses)

IT Cosmetics

(creams; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Cosmetics

(emulsions; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Glycols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(esters, solvents; preparation of film-forming branched/block copolymers for hair styling prepns.)

IT Glycols, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(ethers, solvents; preparation of film-forming branched/block copolymers for hair styling prepns.)

IT Glass transition temperature

Scouring agents

(film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Polishing materials

(furniture; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Drug delivery systems

(gels, ultrasonic diagnosis; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Ethers, biological studies

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(glycol, solvents; preparation of film-forming branched/block copolymers for hair styling prepns.)

IT Cosmetics

(hand sanitizers; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Hair preparations

(mousse; preparation of film-forming branched/block copolymers for hair styling prepns. and other uses)

IT Drug delivery systems

(ointments; film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

IT Monomers

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (polyfunctional; preparation of film-forming branched/block copolymers for  
 hair styling preps. and other uses)

IT Emulsifying agents  
 Propellants (sprays and foams)  
 Surfactants  
 (preparation of film-forming branched/block copolymers for hair styling  
 preps.)

IT Shampoos  
 (preparation of film-forming branched/block copolymers for hair styling  
 preps. and other uses)

IT Acrylic polymers, biological studies  
 RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic  
 preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of film-forming branched/block copolymers for hair styling  
 preps. and other uses)

IT Alcohols, biological studies  
 Esters, biological studies  
 Ethers, biological studies  
 Glycols, biological studies  
 Hydrocarbons, biological studies  
 Petroleum spirits  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (solvents; preparation of film-forming branched/block copolymers for hair  
 styling preps.)

IT Hair preparations  
 (sprays; preparation of film-forming branched/block copolymers for hair  
 styling preps. and other uses)

IT Hair preparations  
 (styling; preparation of film-forming branched/block copolymers for hair  
 styling preps. and other uses)

IT 75-91-2, tert-Butyl hydroperoxide 78-67-1, Azobisisobutyronitrile  
 80-15-9, Cumene hydroperoxide 94-36-0, Benzoyl peroxide, uses  
 105-64-6, Diisopropyl peroxydicarbonate 110-05-4, Di-tert-butyl peroxide  
 927-07-1, tert-Butyl peroxy pivalate 2895-03-6, Lauryl peroxide  
 3457-61-2, tert-Butyl cumyl peroxide 4419-11-8 17026-53-8, Ethyl hexyl  
 peroxydicarbonate 26748-41-4, tert-Butyl peroxyneodecanoate 66427-13-2  
 122460-25-7  
 RL: CAT (Catalyst use); USES (Uses)  
 (branched/block copolymers containing polyacrylate backbone for hair  
 styling compns.)

IT 75-09-2, Methylene chloride, biological studies 110-54-3, Hexane,  
 biological studies 110-82-7, Cyclohexane, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (branched/block copolymers containing polyacrylate backbone for hair  
 styling compns.)

IT 64-17-5, Ethyl alcohol, biological studies 67-63-0, Isopropyl alcohol,  
 biological studies 71-43-2, Benzene, biological studies 75-37-6, Dymel  
 152A 75-65-0, tert-Butyl alcohol, biological studies 79-20-9, Methyl  
 acetate 108-88-3, Toluene, biological studies 115-10-6, Dimethyl ether  
 123-86-4, Butyl acetate 124-68-5, Amp 95 141-78-6, Ethyl acetate,  
 biological studies 9004-98-2, Emulphor on-870 61641-74-5, Propellant  
 A-46  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (film-forming branched/block copolymers containing polyacrylate backbone  
 for cosmetic and other uses)

IT 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-  
 methacrylic acid block copolymer 283149-27-9P, Acrylic  
 acid-allyl methacrylate-butyl acrylate block copolymer  
 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid

block copolymer 283149-29-1P, Acrylic acid-allyl methacrylate-butyl acrylate-methacrylic acid block copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid block copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid block copolymer  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

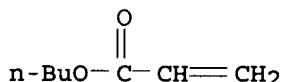
IT 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-methacrylic acid block copolymer 283149-27-9P, Acrylic acid-allyl methacrylate-butyl acrylate block copolymer 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid block copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid block copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid block copolymer  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (film-forming branched/block copolymers containing polyacrylate backbone for cosmetic and other uses)

RN 178331-91-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 1,2-ethanediyl bis(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

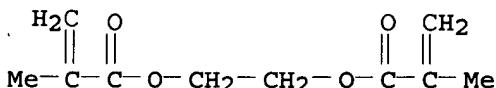
CM 1

CRN 141-32-2  
 CMF C7 H12 O2



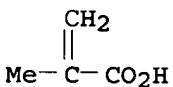
CM 2

CRN 97-90-5  
 CMF C10 H14 O4



CM 3

CRN 79-41-4  
 CMF C4 H6 O2



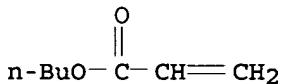
RN 283149-27-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

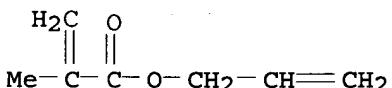
CMF C7 H12 O2



CM 2

CRN 96-05-9

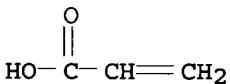
CMF C7 H10 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



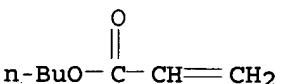
RN 283149-28-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

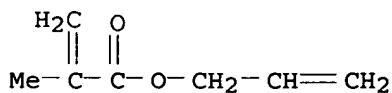
CMF C7 H12 O2



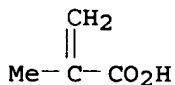
CM 2

CRN 96-05-9

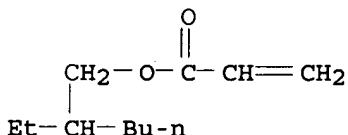
CMF C7 H10 O2



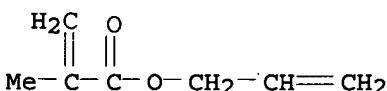
CM 3

CRN 79-41-4  
CMF C4 H6 O2RN 283149-33-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

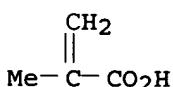
CM 1

CRN 103-11-7  
CMF C11 H20 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

CRN 79-41-4  
CMF C4 H6 O2

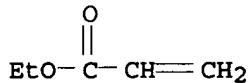
RN 283149-34-8 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSON 4B28 571/272-2505

CN 2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

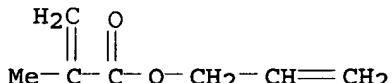
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CRN 140-88-5  
CMF C5 H8 O2



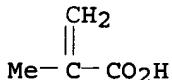
CM 2

CRN 96-05-9  
CMF C7 H10 O2



CM 3

CRN 79-41-4  
CMF C4 H6 O2



RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 10 OF 12 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2002:275758 HCPLUS

DN 136:299460

TI Cosmetic and personal care compositions based on elastomeric block copolymers

IN Frechet, Jean Mj; Hajduk, Damian; Khoshdel, Ezat; Liu, Mingjun; Nielsen, Ralph B.; Reid, Euan Stuart; Rutherford, Keith Leslie

PA Unilever PLC, UK; Unilever NV; Hindustan Lever Limited

SO PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002028358	A1	20020411	WO 2001-EP11312	20010927
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,			

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
 UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2002012295 A5 20020415 AU 2002-12295 20010927  
 EP 1322279 A1 20030702 EP 2001-980456 20010927  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 BR 2001014370 A 20031209 BR 2001-14370 20010927  
 JP 2004510720 T2 20040408 JP 2002-531984 20010927  
 US 2002160026 A1 20021031 US 2001-969900 20011003  
 US 6663855 B2 20031216  
 US 2002159965 A1 20021031 US 2001-969924 20011003  
 US 6685925 B2 20040203  
 US 2004096411 A1 20040520 US 2003-698067 20031030  
 US 6890522 B2 20050510  
 PRAI GB 2000-24182 A 20001003  
 US 2000-678085 A 20001003  
 GB 2000-28604 A 20001123  
 GB 2000-28605 A 20001123  
 WO 2001-EP11312 W 20010927  
 US 2001-969900 A1 20011003

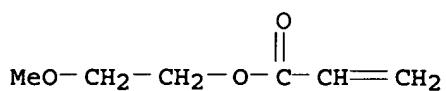
AB Cosmetic or personal care compns., such as for styling hair, comprise a thermoplastic elastomer which is a block copolymer comprising a core polymer having a backbone comprising at least a proportion of C-C bonds and two or more flanking polymers. Each flanking polymer is covalently bound to an end of the core polymer and the core polymer and/or at least one of the flanking polymers is a copolymer derived from two or more monomers. The compns. further comprise a cosmetically acceptable diluent or carrier. For example, a styling mousse was formulated containing, e.g., block copolymer of acrylic acid (AA), Me methacrylate (MMA), and 2-methoxyethyl acrylate (MEA), i.e., (MMA-co-AA)-MEA-(MMA-co-AA) copolymer, 1.5%, silicone emulsion X2 1787 1.2%, Volpo CS 50 0.3%, Sepicide LD 0.4%, Cremophor RH410 0.2%, ethanol 7.5%, CAP 40 8.0%, perfume 0.2%, and water up to 100% (all by weight).

IC ICM A61K007-06  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 39  
 ST acrylic thermoplastic rubber hair styling prepns  
 IT Alcohols, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (C16-18, ethoxylated, Volpo CS 50; hair prepns. containing elastomeric block copolymers)  
 IT Hair preparations  
 (creams, styling; hair prepns. containing elastomeric block copolymers)  
 IT Polysiloxanes, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol mono-Me ether; hair prepns. containing elastomeric block copolymers)  
 IT Polysiloxanes, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (di-Me, 3-hydroxypropyl Me, ethers with polyethylene-polypropylene glycol mono-Bu ether; hair prepns. containing elastomeric block copolymers)  
 IT Hair preparations  
 (gels, styling; hair prepns. containing elastomeric block copolymers)  
 IT Odor and Odorous substances  
 Perfumes  
 Propellants (sprays and foams)

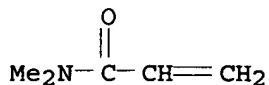
Surfactants  
Thickening agents  
(hair preps. containing elastomeric block copolymers)  
IT Human  
(hair preps. containing elastomeric block copolymers for human hair)  
IT Hair preparations  
(mouses; hair preps. containing elastomeric block copolymers)  
IT Flexibility  
Glass transition temperature  
Molecular weight  
Viscosity  
Young's modulus  
(preparation and properties of elastomeric block copolymers for hair  
preps.)  
IT Acrylic rubber  
Thermoplastic rubber  
RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation and properties of elastomeric block copolymers for hair  
preps.)  
IT Hair preparations  
(sprays; hair preps. containing elastomeric block copolymers)  
IT 64-17-5, Ethanol, biological studies 61641-74-5, CAP 40 138757-67-2,  
Carbopol 980  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair preps. containing elastomeric block copolymers)  
IT 408504-47-2P 408504-48-3P 408504-49-4P  
408504-50-7P  
RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(preparation and properties of elastomeric block copolymers for  
hair preps.)  
IT 3121-61-7, 2-Methoxyethyl acrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation and properties of elastomeric block copolymers for hair  
preps.)  
IT 28628-64-0P, Poly(2-methoxyethyl acrylate)  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and properties of elastomeric block copolymers for hair  
preps.)  
IT 408504-47-2P 408504-48-3P 408504-50-7P  
RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(preparation and properties of elastomeric block copolymers for  
hair preps.)  
RN 408504-47-2 HCAPLUS  
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
N,N-dimethyl-2-propenamide and 2-methoxyethyl 2-propenoate, block (9CI)  
(CA INDEX NAME)

CM 1

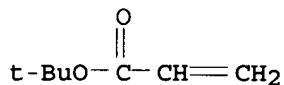
CRN 3121-61-7  
CMF C6 H10 O3



CM 2

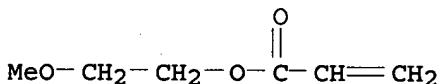
CRN 2680-03-7  
CMF C5 H9 N O

CM 3

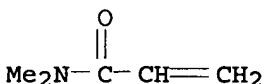
CRN 1663-39-4  
CMF C7 H12 O2

RN 408504-48-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 N,N-dimethyl-2-propenamide and 2-methoxyethyl 2-propenoate, block (9CI)  
 (CA INDEX NAME)

CM 1

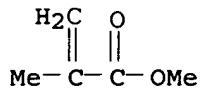
CRN 3121-61-7  
CMF C6 H10 O3

CM 2

CRN 2680-03-7  
CMF C5 H9 N O

CM 3

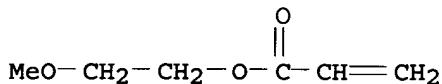
CRN 80-62-6  
CMF C5 H8 O2



RN 408504-50-7 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-methoxyethyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

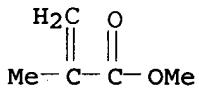
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CRN 3121-61-7  
CMF C6 H10 O3



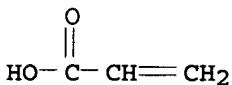
CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 11 OF 12 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 2001:923880 HCPLUS  
DN 136:38072  
TI Preparation of branched/block copolymers for treatment of keratinous substrates  
IN Galleguillos, Ramiro; Smith, David J.; Constantino, Steven A.; Hasman, Daniel F., Jr.  
PA Noveon IP Holdings Corp., USA

SO PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001096429	A1	20011220	WO 2000-US17161	20000622
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6410005	B1	20020625	US 2000-594321	20000615
	CA 2412260	AA	20011220	CA 2000-2412260	20000622
	EP 1290050	A1	20030312	EP 2000-941637	20000622
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	BR 2000015897	A	20030506	BR 2000-15897	20000622
	JP 2004503626	T2	20040205	JP 2002-510561	20000622
PRAI	US 2000-594321	A	20000615		
	US 1998-223664	A2	19981230		
	WO 1999-US30790	A2	19991222		
	WO 2000-US17161	W	20000622		
AB	A block copolymer for hair styling compns. includes hydrophilic and hydrophobic blocks which allow for optimization of desirable characteristics of the hair styling composition, such as flow onto the hair, prevention of curl droop, style retention at high humidity, tack, hardness, resistance to flaking, re-stylability, volumizing, and washability from the hair. The copolymer includes a polyacrylate backbone of hydrophobic blocks, with hydrophilic acrylate side chains. The copolymer is suitable for the formulation of a number of personal care, household, hair care, skin care and other formulations. The copolymer is suited to incorporation into low VOC hydro-alc. hair styling compns. to meet reduced VOC regulations. Thus, a block copolymer prepared by a two-stage polymerization of (a) a monomer composition comprising acrylic acid				
216.00,	Bu acrylate 1386.00, and allyl methacrylate 36.00, and (b) a second monomer composition comprising acrylic acid 1944.00 and allyl methacrylate 18.00 g, in presence of Lupersol-11 18 g and IPA/water solvent 2400 g showed two glass transition temps. (-13.7° and 97°) and the polymer was formulated with ethanol, Amp 95 and deionized water to form a hair-styling composition				
IC	ICM C08F265-04 ICS C08F291-00; A61K007-06; C08F293-00; C08L051-00; C08L053-00				
CC	35-4 (Chemistry of Synthetic High Polymers) Section cross-reference(s): 62				
ST	block copolymer radical polymn two stage prepn; hair styling block copolymer formulation keratinous substrate				
IT	Vinyl compounds, preparation RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aryl, polymers, sulfonic acid derivative; preparation of branched/block copolymers for treatment of hair styling compns.)				
IT	Cosmetics Hair preparations				

(preparation of branched/block copolymers for treatment of hair styling compns.)

IT 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-methacrylic acid **block** copolymer 283149-27-9P, Acrylic acid-allyl methacrylate-butyl acrylate **block** copolymer 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid **block** copolymer 283149-29-1P, Acrylic acid-allyl methacrylate-butyl acrylate-methacrylic acid **block** copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid **block** copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid **block** copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of branched/**block** copolymers for treatment of hair styling compns.)

IT 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-methacrylic acid **block** copolymer 283149-27-9P, Acrylic acid-allyl methacrylate-butyl acrylate **block** copolymer 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid **block** copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid **block** copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid **block** copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of branched/**block** copolymers for treatment of hair styling compns.)

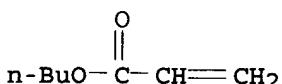
RN 178331-91-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 1,2-ethanediyl bis(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

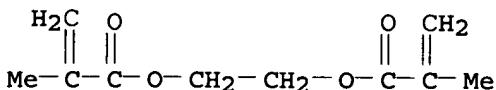
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CM 2

CRN 97-90-5

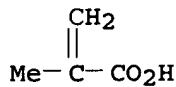
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CM 3

CRN 79-41-4

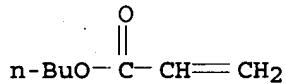
CMF C4 H6 O2



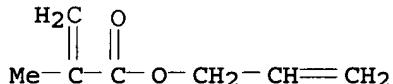
RN 283149-27-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

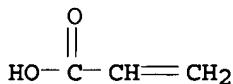
CM 1

CRN 141-32-2  
CMF C7 H12 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

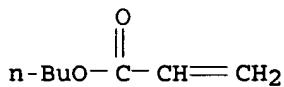
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CMF C3 H4 O2

RN 283149-28-0 HCAPLUS

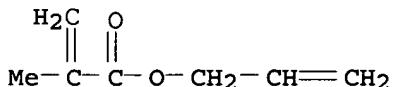
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

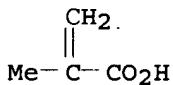
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CM 2

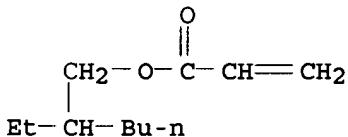
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CMF C7 H10 O2

CM 3

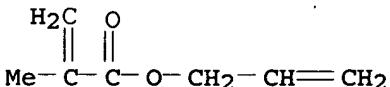
CRN 79-41-4  
CMF C4 H6 O2

RN 283149-33-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-propenoate and  
 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

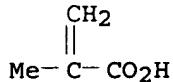
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CM 2

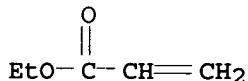
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CM 3

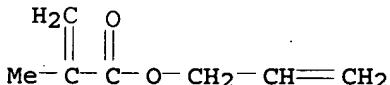
CRN 79-41-4  
CMF C4 H6 O2

RN 283149-34-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate and  
 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

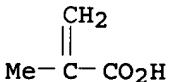
CM 1

CRN 140-88-5  
CMF C5 H8 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

CRN 79-41-4  
CMF C4 H6 O2

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:475706 HCAPLUS  
 DN 133:109627  
 TI Branched/block copolymers for hair styling compositions  
 IN Galleguillos, Ramiro; Smith, David J.; Constantino, Steven P.  
 PA The B.F. Goodrich Company, USA  
 SO PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000040628	A1	20000713	WO 1999-US30790	19991222
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	EP 1141056	A1	20011010	EP 1999-967580	19991222
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9916716	A	20020604	BR 1999-16716	19991222
	JP 2002534540	T2	20021015	JP 2000-592336	19991222
	US 6410005	B1	20020625	US 2000-594321	20000615
	ZA 2002009667	A	20031029	ZA 2002-9667	20021128
PRAI	US 1998-223664	A	19981230		
	WO 1999-US30790	W	19991222		

AB A block copolymer for hair styling compns. includes hydrophilic and hydrophobic blocks which allow for optimization of desirable characteristics of the hair styling composition, such as style retention at high humidity, tack, hardness, resistance to flaking, and washability from the hair. The copolymer includes a polyacrylate backbone of hydrophobic blocks, with hydrophilic acrylate side chains. The copolymer is suitable for the formulation of a number personal care, household, hair care, skin care and other formulation. The copolymer is suitable for incorporation into low VOC aqueous-alc. hair styling compns. to meet reduced VOC regulations. Thus, a block copolymer (I) was prepared from acrylic acid, allyl methacrylate and Bu acrylate and characterized. A hair styling composition contained I 3.00, EtOH 50.00, aminomethylpropanol 0.30, and water 46.70%.

IC ICM C08F265-04

ICS C08F291-00; A61K007-06

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 37

ST acrylate methacrylate block copolymer hair styling prepns

IT Glycols, uses

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(esters; preparation of branched/block copolymers for hair styling compns.)

IT Polishing materials

(furniture; preparation of branched/block copolymers for hair styling compns.)

IT Hair preparations

(gels; preparation of branched/block copolymers for hair styling compns.)

IT Cosmetics

Glass transition temperature

Hair preparations

Polymerization catalysts

Shampoos

(preparation of branched/block copolymers for hair styling compns.)

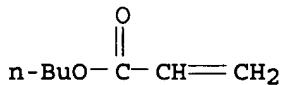
IT Alcohols, uses

Esters, uses  
 Ethers, uses  
 Glycols, uses  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 IT Hair preparations  
 (sprays; preparation of branched/block copolymers for hair styling compns.)  
 IT 121509-44-2P, Ethylene glycol dimethacrylate-methacrylic acid block copolymer 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-methacrylic acid block copolymer 283149-27-9P, Acrylic acid-allyl methacrylate-butyl acrylate block copolymer 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid block copolymer 283149-30-4P, Acrylic acid-allyl methacrylate block copolymer 283149-31-5P, Allyl methacrylate-methacrylic acid block copolymer 283149-32-6P, Acrylic acid-allyl methacrylate-methacrylic acid block copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid block copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid block copolymer  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 IT 283149-29-1P, Acrylic acid-allyl methacrylate-butyl acrylate-methacrylic acid block copolymer  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 IT 75-91-2, tert-Butyl hydroperoxide 78-67-1, Azobisisobutyronitrile  
 80-15-9, Cumene hydroperoxide 94-36-0, Benzoyl peroxide, uses  
 105-64-6, Diisopropyl peroxydicarbonate 110-05-4 927-07-1, Lupersol-11  
 2895-03-6, Lauryl peroxide 3457-61-2, tert-Butyl cumyl peroxide  
 4419-11-8 13472-08-7 17026-53-8, Ethyl hexyl peroxydicarbonate  
 26748-41-4, tert-Butyl peroxyneodecanoate  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 IT 64-17-5, Ethanol, uses 67-63-0, 2-Propanol, uses 71-43-2, Benzene, uses 75-09-2, Methylene chloride, uses 75-65-0, tert-Butyl alcohol, uses 79-20-9 108-88-3, Toluene, uses 110-54-3, Hexane, uses 110-82-7, CycloHexane, uses 123-86-4, Butyl acetate 141-78-6, Acetic acid ethyl ester, uses  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 IT 178331-91-4P, Butyl acrylate-ethylene glycol dimethacrylate-methacrylic acid block copolymer 283149-27-9P, Acrylic acid-allyl methacrylate-butyl acrylate block copolymer 283149-28-0P, Allyl methacrylate-butyl acrylate-methacrylic acid block copolymer 283149-32-6P, Acrylic acid-allyl methacrylate-methacrylic acid block copolymer 283149-33-7P, Allyl methacrylate-2-ethylhexyl acrylate-methacrylic acid block copolymer 283149-34-8P, Allyl methacrylate-ethyl acrylate-methacrylic acid block copolymer  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of branched/block copolymers for hair styling compns.)  
 RN 178331-91-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 1,2-ethanediyl bis(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

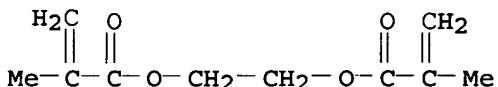
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CRN 141-32-2  
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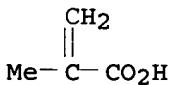
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CM 3

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CMF C4 H6 O2

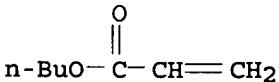


RN 283149-27-9 HCAPLUS

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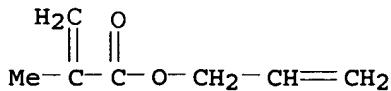
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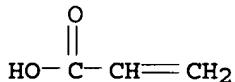


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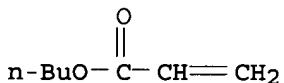


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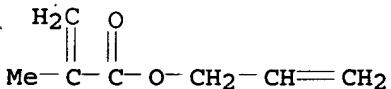
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RN 283149-28-0 HCAPLUS  
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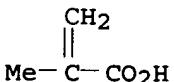
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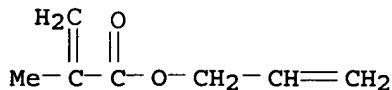
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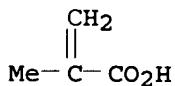
CRN 79-41-4  
CMF C4 H6 O2

RN 283149-32-6 HCAPLUS  
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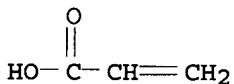
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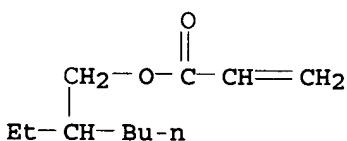
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CM 3

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CMF C3 H4 O2

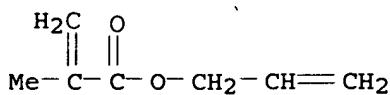
RN 283149-33-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-propenoate and  
 2-propenyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

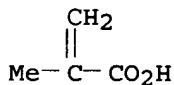
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CMF C11 H20 O2

CM 2

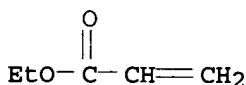
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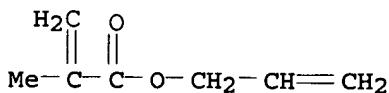
CM 3

CRN 79-41-4  
CMF C4 H6 O2RN 283149-34-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate and  
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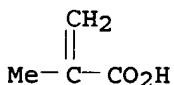
CM 1

CRN 140-88-5  
CMF C5 H8 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

CRN 79-41-4  
CMF C4 H6 O2RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L9 310239 SEA FILE=REGISTRY ABB=ON PACR/PCT  
 L11 75720 SEA FILE=REGISTRY ABB=ON L9 AND 3/NC  
 L14 48289 SEA FILE=REGISTRY ABB=ON L11 NOT 46.150.18/RID  
 L16 44419 SEA FILE=REGISTRY ABB=ON L14 NOT 1.30.1/RID  
 L17 35664 SEA FILE=REGISTRY ABB=ON L16 NOT (PM/PCT OR OTHER/PCT OR  
     PUR/PCT)  
 L18 31845 SEA FILE=REGISTRY ABB=ON L17 NOT SALT  
 L19 28735 SEA FILE=REGISTRY ABB=ON L18 NOT (1-20/P,SI)  
 L20 44470 SEA FILE=HCAPLUS ABB=ON L19  
 L23 801 SEA FILE=HCAPLUS ABB=ON L20(L) (BLOCK? OR TRIBLOCK?)  
 L24 79 SEA FILE=HCAPLUS ABB=ON L23 AND (TG OR GLASS TRANSITION)  
 L25 15377 SEA FILE=HCAPLUS ABB=ON L20(L) PREP/RL  
 L26 57 SEA FILE=HCAPLUS ABB=ON L24 AND L25  
 L27 12 SEA FILE=HCAPLUS ABB=ON L26 AND COSMETIC?/SC,SX  
 L28 12 SEA FILE=HCAPLUS ABB=ON L24 AND COSMETIC?/SC,SX  
 L29 10 SEA FILE=HCAPLUS ABB=ON L26 AND COS/RL  
 L30 12 SEA FILE=HCAPLUS ABB=ON (L27 OR L28 OR L29)  
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 L35 2014 SEA FILE=REGISTRY ABB=ON 5888-33-5/CRN  
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 L54 3112 SEA FILE=REGISTRY ABB=ON 585-07-9/CRN  
 L55 8048 SEA FILE=REGISTRY ABB=ON L45 NOT (L52 OR L54)  
 L56 21600 SEA FILE=HCAPLUS ABB=ON L55  
 L57 217 SEA FILE=HCAPLUS ABB=ON L56(L) PREP/RL(L) (BLOCK OR TRIBLOCK)  
 L58 35 SEA FILE=HCAPLUS ABB=ON L57 AND (TG OR GLASS TRANSITION?)  
 L61 56950 SEA FILE=REGISTRY ABB=ON 79-10-7/CRN  
 L66 4126 SEA FILE=REGISTRY ABB=ON L19 AND L61  
 L67 4066 SEA FILE=REGISTRY ABB=ON L66 NOT 1-3/M  
 L68 4015 SEA FILE=REGISTRY ABB=ON L67 NOT (L52 OR L54)  
 L69 11201 SEA FILE=HCAPLUS ABB=ON L68  
 L70 67 SEA FILE=HCAPLUS ABB=ON L69(L) PREP/RL(L) (BLOCK OR TRIBLOCK)  
 L71 119347 SEA FILE=HCAPLUS ABB=ON (TG OR GLASS TRANSITION)  
 L72 11 SEA FILE=HCAPLUS ABB=ON L70 AND L71  
 L73 24 SEA FILE=HCAPLUS ABB=ON (L72 OR L58) NOT L30

24 more CA references limited to claim 15  
 components or acrylic acid. NOT  
 limited to cosmetic use

=> d 173 bib abs hitind hitstr 1-24

L73 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:857647 HCAPLUS  
 DN 141:332971  
 TI Manufacture of acrylic films from block copolymers  
 IN Guerret, Olivier; Gerard, Pierre  
 PA Atofina, Fr.  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2004087796	A1	20041014	WO 2004-FR713	20040323
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

FR 2852963	A1	20041001	FR 2003-3681	20030326
FR 2852961	A1	20041001	FR 2003-11174	20030924

PRAI	FR 2003-3681	A	20030326
	FR 2003-11174	A	20030924

AB Films with thickness 40-300  $\mu\text{m}$ , haze <2%, and breaking elongation >50% are manufactured by extrusion of compns. containing 95-100%  $\geq 1$  (A)m(B)n block copolymers ( $n \geq 2$ ,  $m \leq n$ ) and 0-5%  $\geq 1$  A polymer, B polymer block being directly bonded to a core polymer prepared by polymerization

of a monomer mixture containing  $\geq 60\%$  acrylic compds. in the presence of alkoxyamines having  $\geq 1$  aminoxy group bonded to an organic or mineral radical having mol. weight  $\geq 14$  g/mol bonded to the O through a carbonylalkyl or aryl group such as  $(\text{EtO})_2\text{P}(\text{:O})\text{CHMeN}(\text{CMe}_3)\text{OCHMeCO}_2(\text{CH}_2)_6\text{OCOCHMeON}(\text{CMe}_3)\text{CH}(\text{CMe}_3)\text{P}(\text{:O})(\text{OEt})_2$ , with the A polymer block being prepared by polymerization of a mixture containing  $\geq 60\%$  methacrylic compds.. Block B has  $T_g < 0^\circ$  and represents 10-50% of the copolymer.

IC ICM C08J005-18

ICS C08F297-00; C08F293-00

CC 37-3 (Plastics Manufacture and Processing)

IT 135028-55-6P, Butyl acrylate-methacrylic acid-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of transparent ductile acrylic extruded films from block copolymers prepared in presence of alkoxyamine catalysts)

IT 135028-55-6P, Butyl acrylate-methacrylic acid-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of transparent ductile acrylic extruded films from block copolymers prepared in presence of alkoxyamine catalysts)

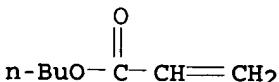
RN 135028-55-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and methyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

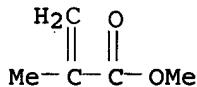
CMF C7 H12 O2



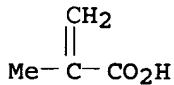
CM 2

CRN 80-62-6

CMF C5 H8 O2



CM 3

CRN 79-41-4  
CMF C4 H6 O2RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:800858 HCAPLUS

DN 141:296709

TI Manufacture of acrylic films from block copolymers

IN Guerret, Olivier; Gerard, Pierre

PA Atofina, Fr.

SO Fr. Demande, 19 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2852963	A1	20041001	FR 2003-3681	20030326
	FR 2852961	A1	20041001	FR 2003-11174	20030924
	WO 2004087796	A1	20041014	WO 2004-FR713	20040323
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI FR 2003-3681 A 20030326

FR 2003-11174 A 20030924

AB Films with thickness 40-300  $\mu\text{m}$ , haze <2%, and breaking elongation >50% are manufactured by extrusion of compns. containing 95-100%  $\geq 1$  (A)nB block copolymers ( $n \geq 2$ ) and 0-5%  $\geq 1$  A' polymer where A and A' = the same or different mostly methacrylic blocks and B = mostly acrylic blocks prepared by polymerization in the presence of alkoxyamines having  $\geq 1$  alkoxyamine group bonded to an organic or mineral radical and having radicals with mol. weight >16 g/mol bonded to the N such as  $(\text{EtO})_2\text{P}(\text{:O})\text{CHMeN}(\text{CMe}_3)\text{OCHMeCO}_2(\text{CH}_2)_6\text{OCOCHMeON}(\text{CMe}_3)\text{CH}(\text{CMe}_3)\text{P}(\text{:O})(\text{OEt})_2$ .

Block B has  $T_g < 0^\circ$  and represents  $\leq 50\%$  of the copolymer, and block A optionally contains  $\leq 20\%$  units based on acrylic monomers.

IC ICM C08L033-06

ICS C08J005-18; B32B027-30

CC 37-3 (Plastics Manufacture and Processing)

IT 135028-55-6P, Butyl acrylate-methacrylic acid-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of transparent ductile acrylic extruded films from block copolymers prepared in presence of alkoxyamine catalysts)

IT 135028-55-6P, Butyl acrylate-methacrylic acid-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of transparent ductile acrylic extruded films from block copolymers prepared in presence of alkoxyamine catalysts)

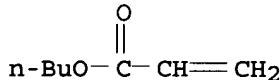
RN 135028-55-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and methyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

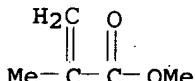
CMF C7 H12 O2



CM 2

CRN 80-62-6

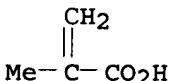
CMF C5 H8 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



L73 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:525107 HCAPLUS

DN 141:72800

TI Star-shaped acrylic block copolymers for pressure-sensitive adhesives and

hot-melt adhesives  
 IN Simal, Francois; Tweedy, Harrell; Van Es, Steven; Roose, Patrice  
 PA Ucb, S.A., Belg.  
 SO Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1433799	A2	20040630	EP 2002-28900	20021223
	EP 1433799	A3	20040714		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	WO 2004056898	A2	20040708	WO 2003-EP14658	20031219
	WO 2004056898	A3	20041111		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI EP 2002-28900 A 20021223

AB The star-shaped thermoplastic elastomers made of acrylic block copolymers, are obtained by transition metal-catalyzed radical polymerization and are constituted of core arms made by monomers and had  $T_g$  -65° to -20°, and of shell arms made by monomers and had  $T_g$  70-160°. The core copolymer has polydispersity  $\geq 2$  and the final copolymer has polydispersity 3-10. Thus, a star-block copolymer comprised a core block containing Bu acrylate 200 mL, 2-bromoisoctyrate of pentaerythritol 1090 mg, CuBr 854.7 mg, Cu 37 mg, N,N,N',N'',N'''-pentamethyldiethylenetriamine 1.24, toluene 122 mL and dodecane 10 mL and a shell block containing Me methacrylate 19.1 mL, iso-bornyl methacrylate 27.3 mL and Cu 37 mg, showing  $T_g$  -48° (core block) and 145° (shell block), resp.

IC ICM C08F293-00  
 ICS C09J153-00

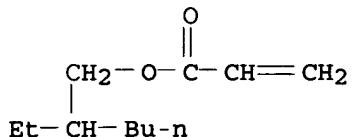
CC 39-4 (Synthetic Elastomers and Natural Rubber)  
 Section cross-reference(s): 38

IT 119786-15-1P, 2-Ethylhexyl acrylate-methyl methacrylate block copolymer  
 141386-42-7P 710338-07-1P, Butyl acrylate-isobornyl  
 methacrylate-methyl methacrylate block copolymer 710338-08-2P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (star-block, rubber; star-shaped acrylic block  
 copolymers for pressure-sensitive adhesives and hot-melt adhesives)

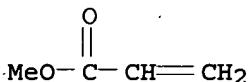
IT 141386-42-7P 710338-07-1P, Butyl acrylate-isobornyl  
 methacrylate-methyl methacrylate block copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (star-block, rubber; star-shaped acrylic block  
 copolymers for pressure-sensitive adhesives and hot-melt adhesives)

RN 141386-42-7 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl  
 2-propenoate and methyl 2-propenoate, block (9CI) (CA INDEX NAME)

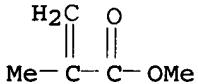
CM 1

CRN 103-11-7  
CMF C11 H20 O2

CM 2

CRN 96-33-3  
CMF C4 H6 O2

CM 3

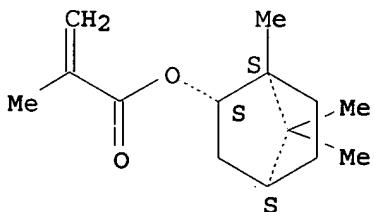
CRN 80-62-6  
CMF C5 H8 O2

RN 710338-07-1 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate  
 and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl  
 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

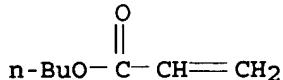
CM 1

CRN 7534-94-3  
CMF C14 H22 O2

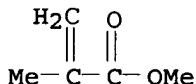
Relative stereochemistry.



CM 2

CRN 141-32-2  
CMF C7 H12 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

L73 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:414661 HCAPLUS  
 DN 140:407926  
 TI Melt-processable (meth)acrylate block copolymer compositions for adhesives and their preparation  
 IN Everaerts, Albert I.; Ma, Jingjing; Khandpur, Ashish K.; D'Haese, Francois C.; Xia, Jianhui; Nguyen, Lang N.  
 PA 3M Innovative Properties Co., USA  
 SO U.S. Pat. Appl. Publ., 18 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004097658	A1	20040520	US 2002-295810	20021115
US 6806320	B2	20041019		
WO 2004046215	A2	20040603	WO 2003-US33318	20031010
WO 2004046215	A3	20041111		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-295810 A 20021115  
 AB The composition, useful for adhesives, pressure-sensitive adhesives, sealants, elastomers, etc., comprises a block copolymer containing  $\geq 1$  soft polymeric block with low glass transition temperature and  $\geq 1$  high glass transition temperature copolymeric end block containing first monomeric units and aromatic monomeric units, and second monomeric units; and a tackifier. Thus, poly(tert-Bu acrylate) was

polymerized with Me methacrylate and cyclohexyl methacrylate and transesterification reacted with isoctyl alc. to give a block polymer with mol. weight of Me methacrylate-cyclohexyl methacrylate block 8000 and mol. weight of poly(isoctyl acrylate) 180,000.

IC ICM C08F293-00

INCL 525244000; 525299000

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 39, 42

IT 690269-23-9P, Cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate block copolymer 690271-92-2P 690271-95-5P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(melt-processable (meth)acrylate block copolymer compns. for adhesives)

IT 690269-22-8P 690271-91-1P 842150-65-6P 842150-68-9P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(triblock; melt-processable (meth)acrylate block copolymer compns. for adhesives)

IT 690269-23-9P, Cyclohexyl methacrylate-2-ethylhexyl acrylate-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(melt-processable (meth)acrylate block copolymer compns. for adhesives)

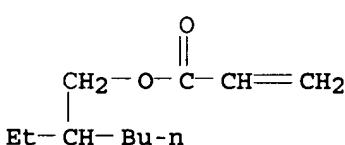
RN 690269-23-9 HCPLUS

CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with 2-ethylhexyl 2-propenoate and methyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 103-11-7

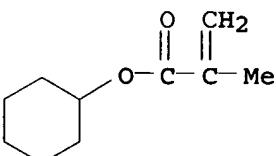
CMF C11 H20 O2



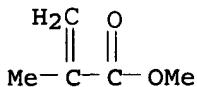
CM 2

CRN 101-43-9

CMF C10 H16 O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2

IT 690269-22-8P 842150-65-6P

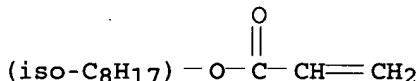
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(triblock; melt-processable (meth)acrylate block copolymer compns. for adhesives)

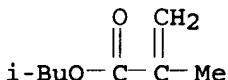
RN 690269-22-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with isooctyl 2-propenoate and 2-methylpropyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

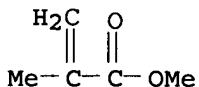
CM 1

CRN 29590-42-9  
CMF C11 H20 O2  
CCI IDS

CM 2

CRN 97-86-9  
CMF C8 H14 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

RN 842150-65-6 HCAPLUS

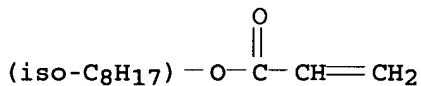
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with isooctyl 2-propenoate and 2-methylpropyl 2-methyl-2-propenoate, triblock (9CI) (CA INDEX NAME)

CM 1

CRN 29590-42-9

CMF C11 H20 O2

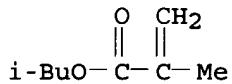
CCI IDS



CM 2

CRN 97-86-9

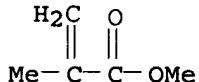
CMF C8 H14 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:125136 HCAPLUS

DN 140:321830

TI Synthesis of Block Copolymers Possessing Fluoropolymer and Non-Fluoropolymer Segments by Radical Polymerization

AU Shi, Zhiqing; Holdcroft, Steven

CS Department of Chemistry, Simon Fraser University, Burnaby, BC, V5A 1S6, Can.

SO Macromolecules (2004), 37(6), 2084-2089

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB The synthesis of block copolymers comprising fluoropolymer and non-fluoropolymer segments is reported. The synthetic method is based on chain transfer emulsion polymerization of fluoro monomers and their subsequent

employment as macroinitiators in atom transfer radical polymerization (ATRP) of non-fluorinated vinyl monomers. Trichloromethyl-terminated copolymers of vinylidene difluoride (VDF) and hexafluoropropylene (HFP), possessing mol. wts. up to 25 000 g/mol, were obtained by emulsion polymerization in the presence

of chloroform and used to initiate the ATRP of styrene (St) and Me methacrylate (MMA) to form a series of P(VDF-co-HFP)-b-PS and P(VDF-co-HFP)-b-PMMA block copolymers. NMR, GPC, DSC, and TEM anal. confirmed the compns. of the block copolymers. The polymers exhibited a phase-separated morphol. in the solid state and possessed distinct glass transition temps. associated with fluoropolymer, PS, and PMMA domains.

CC 35-4 (Chemistry of Synthetic High Polymers)

IT Glass transition temperature

Molecular weight

Molecular weight distribution

(synthesis of block copolymers possessing fluoropolymer and non-fluoropolymer segments by radical polymerization)

IT 677353-47-8P, Vinylidene fluoride-hexafluoropropylene-styrene block copolymer 677353-57-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis of block copolymers possessing fluoropolymer and non-fluoropolymer segments by radical polymerization)

IT 677353-57-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis of block copolymers possessing fluoropolymer and non-fluoropolymer segments by radical polymerization)

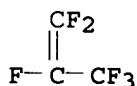
RN 677353-57-0 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,1-difluoroethene and 1,1,2,3,3,3-hexafluoro-1-propene, block (9CI) (CA INDEX NAME)

CM 1

CRN 116-15-4

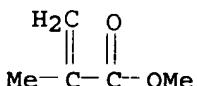
CMF C3 F6



CM 2

CRN 80-62-6

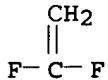
CMF C5 H8 O2



CM 3

CRN 75-38-7

CMF C2 H2 F2



RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:582655 HCAPLUS  
DN 139:134993  
TI Coating agents for antiblocking of dip moldings and dip moldings therefrom  
IN Liu, Xiang; Nakamura, Misao; Kodama, Kazumi  
PA Nippon Zeon Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003213197	A2	20030730	JP 2002-15707	20020124
	WO 2003062307	A2	20030731	WO 2003-JP657	20030124
	WO 2003062307	A3	20031030		
	W: CN, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
PRAI	JP 2002-15707	A	20020124		
	JP 2002-188921	A	20020628		
AB	Title agents contain polymer latices consisting of polymer components having <b>glass-transition temperature (Tg)</b> of -20° to +30° and polymer components having <b>Tg</b> of 60-140°. Polymerizing Bu acrylate (I) and Me methacrylate (II) in aqueous medium containing poly(vinyl alc.) (PVA) and K2S2O8, further adding aqueous emulsion containing I, II, 2-hydroxyethyl acrylate and PVA gave a latex containing 350-nm polymer with <b>Tg</b> of -2° and +94°. A coagulated carboxylated nitrile rubber film-attached glove mold was dipped into the above latex, pulled, and vulcanized to form a glove showing smooth removability from mold, no blocking, and resin dust 0.38 mg.				
IC	ICM C09D157-00 ICS A41D019-00; B29C041-14; C08F002-00; C08F002-16; C08F002-44; C08F261-04; C09D005-02; C09D121-02; C09D129-04				
CC	42-10 (Coatings, Inks, and Related Products) Section cross-reference(s): 39				
IT	Acrylic polymers, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (block; low and high <b>glass-transition temperature</b> -containing polymer latex coatings for antiblocking of rubber gloves)				
IT	Coating materials (blocking-resistant; low and high <b>glass-transition temperature</b> -containing polymer latex coatings for antiblocking of rubber gloves)				
IT	Nitrile rubber, uses RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES				

## (Uses)

(carboxy-containing; low and high glass-transition temperature-containing polymer latex coatings for antiblocking of rubber gloves)

IT Gloves

(low and high glass-transition temperature-containing polymer latex coatings for antiblocking of rubber gloves)

IT 475503-95-8P, Butyl acrylate-2-hydroxyethyl acrylate-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(low and high glass-transition temperature-containing polymer latex coatings for antiblocking of rubber gloves)

IT 9003-18-3

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(nitrile rubber, carboxy-containing; low and high glass-transition temperature-containing polymer latex coatings for antiblocking of rubber gloves)

IT 475503-95-8P, Butyl acrylate-2-hydroxyethyl acrylate-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(low and high glass-transition temperature-containing polymer latex coatings for antiblocking of rubber gloves)

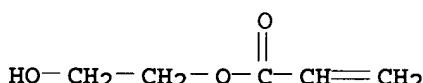
RN 475503-95-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-hydroxyethyl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 818-61-1

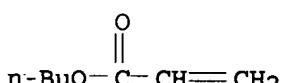
CMF C5 H8 O3



CM 2

CRN 141-32-2

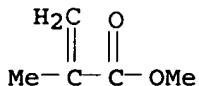
CMF C7 H12 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



L73 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:68838 HCAPLUS  
DN 138:107977  
TI Two sided pressure-sensitive adhesive sheet using block copolymer substrate and its production method  
IN Kawaguchi, Yoshihide; Moroishi, Hiroshi; Inoue, Tetsuo; Doi, Tomoko  
PA Nitto Denko Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003027018	A2	20030129	JP 2001-217014	20010717
PRAI	JP 2001-217014		20010717		

AB Titled sheet with good re-peelability after using is obtained by laminating adhesive layers on both sides of a stretched substrate film, which is made from a block copolymer composed of 40-90 weight% of block (A) with  $T_g > 300$  K, Mn = 35,000-200,000, and polydispersity of 1.2-3.0, and block (B), poly(meth)acrylate, with  $T_g < 300$  K. Thus, Bu acrylate 2.5 g and Et acrylate 2.5 g were polymerized in the presence of 2,2'-dipyridine and CuO using Et 2-bromoisobutylate as catalyst at 100°, and then formed block copolymer with a PMMA block with  $T_g = 237$  K; the block copolymer was then extruded and biaxially stretched to obtain 50- $\mu\text{m}$  substrate film, on which acrylic adhesive prepared from Bu acrylate and Et acrylate was coated to receive the two side adhesive sheet.

IC ICM C09J007-02  
ICS B29C055-02; B32B027-00; B32B027-30; C08F297-06; B29K033-04;  
B29L007-00; B29L009-00

CC 38-3 (Plastics Fabrication and Uses)

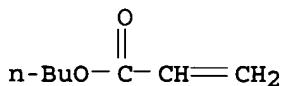
IT 141386-41-6P, Methyl methacrylate-Butyl acrylate-2-ethylhexyl acrylate block copolymer 154348-34-2P, Methyl methacrylate-Butyl acrylate-ethyl acrylate block copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of block copolymer substrate as substrate of two side pressure-sensitive adhesive sheet)

IT 141386-41-6P, Methyl methacrylate-Butyl acrylate-2-ethylhexyl acrylate block copolymer 154348-34-2P, Methyl methacrylate-Butyl acrylate-ethyl acrylate block copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of block copolymer substrate as substrate of two side pressure-sensitive adhesive sheet)

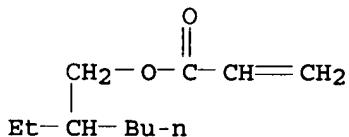
RN 141386-41-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-ethylhexyl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

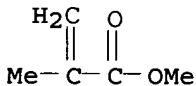
CRN 141-32-2  
CMF C7 H12 O2



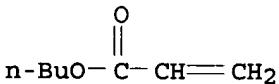
CM 2

CRN 103-11-7  
CMF C11 H20 O2

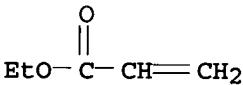
CM 3

CRN 80-62-6  
CMF C5 H8 O2RN 154348-34-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and ethyl 2-propenoate, block (9CI) (CA INDEX NAME)

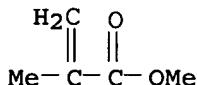
CM 1

CRN 141-32-2  
CMF C7 H12 O2

CM 2

CRN 140-88-5  
CMF C5 H8 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

L73 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:768010 HCAPLUS  
 DN 137:279937  
 TI Polymeric material responsible to ultrashort laser processing and plastic products therewith  
 IN Katayama, Shigeru; Horiike, Mika  
 PA Nitto Denko Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002294086	A2	20021009	JP 2001-102876	20010402
PRAI JP 2001-102876		20010402		
AB	Title resin material, processable with ultrashort laser beams of pulse width $\leq 10-12$ s, is characterized by (A) $\geq 2$ glass transition temps. and (B) $\geq 10\%$ light transmission in the whole visible region. Thus, the block copolymer of PMMA and Bu acrylate and Et acrylate random copolymer by living radical polymerization was added with a triazine crosslinker (with maximum absorption at 250 nm and 360 nm), cast into a film (light transmission 92.7% and glass transition temps. $-30^\circ$ and $104^\circ$ , resp.), and irradiated with femtosecond Ti:saphhire laser, showing a localized refractive index change of $1.9 + 10^{-3}$ in the irradiated region.			
IC	ICM C08L101-00 ICS B29C071-04; C08F297-00; C08J007-00; B29K101-00			
CC	37-3 (Plastics Manufacture and Processing) Section cross-reference(s): 36, 38			
IT	154348-34-2P, Butyl acrylate-ethyl acrylate-methyl methacrylate block copolymer RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (crosslinked with triazine; polymeric material responsible to ultrashort laser processing)			
IT	154348-34-2P, Butyl acrylate-ethyl acrylate-methyl methacrylate block copolymer RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (crosslinked with triazine; polymeric material responsible to ultrashort laser processing)			

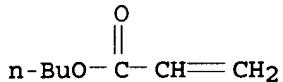
RN 154348-34-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and ethyl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

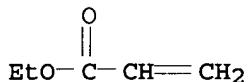
CMF C7 H12 O2



CM 2

CRN 140-88-5

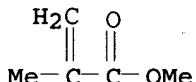
CMF C5 H8 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



L73 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:538222 HCAPLUS

DN 137:79657

TI Acrylic block copolymers, their manufacture, and vibration damping compositions containing them

IN Yamazaki, Hiroshi; Yoshida, Masatoshi

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002201244	A2	20020719	JP 2000-402624	20001228
PRAI JP 2000-402624		20001228		

AB The copolymers are manufactured by polymerizing  $\geq 2$  sets of monomer components with different composition, satisfying that (A) the maximum difference of glass-transition temperature ( $T_g$ ) of polymers derived from each component is  $130\text{--}200^\circ$  and (B) content of the

components giving polymers with  $T_g \geq 50^\circ$  is 35-65% (on the total components), in the presence of mercaptanes with valence of  $\geq 3$ , wherein the 2nd monomer component (different from the 1st monomer component) is added while d.p. of the 1st one is  $\leq 45\%$ . Thus, polymerizing Me methacrylate 267.3, acrylic acid (I) 2.7, and trimethylolpropane tris(3-mercaptopropionate) 6.0 parts to d.p. 31.1%, dropping a 326.7:3.3 Bu acrylate-I mixture to the intermediate, and polymerizing

them resulted in a block copolymer showing a temperature range satisfying  $\tan\delta$  of  $\geq 3$  -8 to  $129^\circ$ , tensile strength 1.06 MPa, and elongation 1630%.

IC ICM C08F293-00

ICS C08L053-00; C09K003-00; F16F015-02; F16F015-04; F16F015-08

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

IT 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer 214077-20-0P, Acrylic acid-butyl acrylate-methyl methacrylate-tetraethylene glycol diacrylate block copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of acrylic star-block copolymers with good vibration-damping properties in wide temperature range)

IT 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of acrylic star-block copolymers with good vibration-damping properties in wide temperature range)

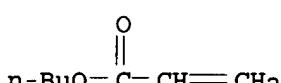
RN 167936-22-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

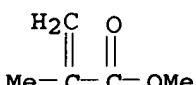
CMF C7 H12 O2



CM 2

CRN 80-62-6

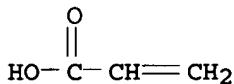
CMF C5 H8 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



L73 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:396625 HCAPLUS  
 DN 136:402815  
 TI Adhesive compositions with good peelability and adhesion stability, and their products  
 IN Kobayashi, Nobuhiro; Tsunemine, Naoki; Kataoka, Shingo  
 PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002155255	A2	20020528	JP 2000-354594	20001121
PRAI JP 2000-354594		20001121		

AB The compns. contain (A) polymercaptan-initiated star block polymers, which mainly comprise (meth)acrylic acid C1-25 alkyl esters and have blocks showing  $T_g \geq 273$  K and blocks showing  $T_g < 273$  K and (B) polycarboxylic acids. Thus, Me methacrylate and acrylic acid were polymerized in the presence of pentaerythritol tetrakis(thioglycolate and further polymerized with Bu acrylate and acrylic acid to give a copolymer solution, which was mixed with unneutralized Latemul ASK and other additives to give a hot-melt adhesive showing heat-resistant high adhesive strength and good peelability.

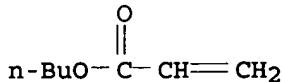
IC ICM C09J151-00  
 ICS C09J007-02; C09J011-06; G09F003-10; C09J163-00; C09J175-04  
 CC 38-3 (Plastics Fabrication and Uses)  
 IT 108501-18-4P, Butyl acrylate-methyl methacrylate block copolymer  
 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer 431877-50-8P, Acrylic acid-butyl acrylate-hydroxyethyl acrylate-phenyl methacrylate block copolymer 431878-03-4P, Acrylic acid-butyl acrylate-2-ethylhexyl acrylate-hydroxyethyl acrylate-methyl methacrylate block copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (star-block, polymercaptan-initiated; adhesive compns. with good peelability and adhesion stability)

IT 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (star-block, polymercaptan-initiated; adhesive compns. with good peelability and adhesion stability)

RN 167936-22-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

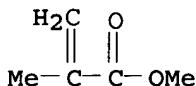
CM 1

CRN 141-32-2  
CMF C7 H12 O2



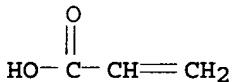
CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2



L73 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:244673 HCAPLUS  
 DN 136:279866  
 TI Preparation of high-molecular-weight block copolymers  
 IN Moroishi, Hiroshi; Yamamoto, Michiharu; Kawaguchi, Yoshihide; Nakano, Fumiko; Doi, Tomoko  
 PA Nitto Denko Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002097238	A2	20020402	JP 2000-286669	20000921
PRAI JP 2000-286669		20000921		
AB	The polymers with Mn $\geq$ 10,000 and tensile modulus $\geq$ 1 kg/mm <sup>2</sup> comprise a polymeric block with Tg <300 K and a polymeric block with Tg $\geq$ 300 K and show no adhesiveness at room temperature. Thus, a hydroxy-terminated Bu acrylate-Me methacrylate block copolymer (Mn 48,000) was prepared in the presence of 2,2'-bipyridine, copper bromide, and a small amount of 6-hydroxyhexyl acrylate. The polymer was extruded to give a thermally stable transparent film with tensile modulus 35 kg/mm <sup>2</sup> .			
IC	ICM C08F297-08 ICS C08F004-10; C09D153-00; C09D201-00			
CC	35-4 (Chemistry of Synthetic High Polymers)			

Section cross-reference(s): 38

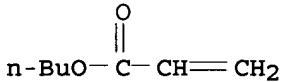
IT 108501-18-4DP, Butyl acrylate-methyl methacrylate block copolymer, hydroxy-terminated 154348-34-2P, Butyl acrylate-ethyl acrylate-methyl methacrylate block copolymer 405905-87-5P, Butyl acrylate-methyl methacrylate-trimethylolpropane-TDI copolymer 405907-08-6P, Butyl acrylate-2-methoxyethyl acrylate-methyl methacrylate block copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of high-mol.-weight block copolymers by living radical polymerization)

IT 154348-34-2P, Butyl acrylate-ethyl acrylate-methyl methacrylate block copolymer 405907-08-6P, Butyl acrylate-2-methoxyethyl acrylate-methyl methacrylate block copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of high-mol.-weight block copolymers by living radical polymerization)

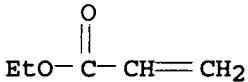
RN 154348-34-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and ethyl 2-propenoate, block (9CI) (CA INDEX NAME)

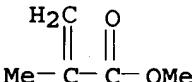
CM 1

CRN 141-32-2  
CMF C7 H12 O2

CM 2

CRN 140-88-5  
CMF C5 H8 O2

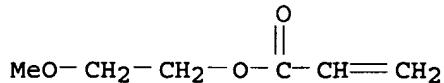
CM 3

CRN 80-62-6  
CMF C5 H8 O2

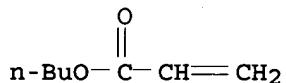
RN 405907-08-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-methoxyethyl 2-propenoate, block (9CI) (CA INDEX NAME)

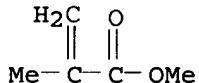
CM 1

CRN 3121-61-7  
CMF C6 H10 O3

CM 2

CRN 141-32-2  
CMF C7 H12 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

L73 ANSWER 12 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:107475 HCPLUS  
 DN 136:168590

TI Adhesives based on block copolymers having B-A/C-B structures

IN Husemann, Marc; Zoellner, Stephan

PA Tesa A.-G., Germany

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002010307	A2	20020207	WO 2001-EP8736	20010727
	WO 2002010307	A3	20020502		
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10036804	A1	20020207	DE 2000-10036804	20000728
	EP 1311648	A2	20030521	EP 2001-969542	20010727
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2004505164	T2	20040219	JP 2002-516029	20010727

US 2003190467	A1	20031009	US 2003-343182	20030602
PRAI DE 2000-10036804	A	20000728		
WO 2001-EP8736	W	20010727		

AB Block polymers useful as contact and hot-melt adhesives have the structure B-A/C-B [B = terminal block with glass temperature (Tg) 20-175°, A/C = copolymer block with Tg -80 to 0°], B being insol. in and immiscible with A/C. Stirring 400 mL styrene and 3.47 g bis(1-phenylethyl) trithiocarbonate at 110° for 30 h gave a polystyrene trithiocarbonate derivative (I) with number-average mol. weight (Mn) 34,200 and polydispersity 1.17. Stirring I 32, 2-ethylhexyl acrylate 442, N-tert-butylacrylamide 4.5, and AIBN 0.12 g at 60° for 24 h gave a block copolymer with Mn 173,000 and polydispersity 1.47, having adhesion to steel 3.4 N/cm.

IC ICM C09J153-00

CC 38-3 (Plastics Fabrication and Uses)

IT 119-61-9DP, Benzophenone, acrylate derivs., block polymers with ethylhexyl acrylate and styrene 155430-22-1P, Butyl acrylate-2-hydroxyethyl acrylate-styrene block copolymer 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer 395066-37-2P, Ebecryl P 36-2-ethylhexyl acrylate-styrene block copolymer 395639-59-5P, N-tert-Butylacrylamide-2-ethylhexyl acrylate-styrene block copolymer 395652-04-7P, Benzoin, acrylate-2-ethylhexyl acrylate-styrene block copolymer 395652-05-8P, Butyl acrylate-2-ethylhexyl acrylate-isoprene-styrene block copolymer 395681-29-5P, 2-Ethylhexyl acrylate-isoprene-styrene block copolymer 404963-08-2P, Butyl acrylate-isoprene-styrene block copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(adhesives based on block copolymers having B-A/C-B structures)

IT 167936-22-3P, Acrylic acid-butyl acrylate-methyl methacrylate block copolymer

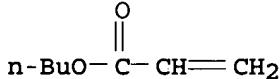
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(adhesives based on block copolymers having B-A/C-B structures)

RN 167936-22-3 HCAPLUS

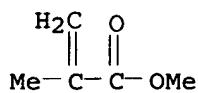
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

CM 1

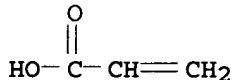
CRN 141-32-2  
CMF C7 H12 O2

CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2

L73 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:25934 HCAPLUS

DN 136:86628

TI Low-stress and low-moisture-absorption epoxy resin compositions, their manufacture and cured products

IN Hikita, Shinya; Ujigawa, Norihisa

PA Nof Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002003699	A2	20020109	JP 2000-181889	20000616
PRAI JP 2000-181889		20000616		

AB The compns. contain (A) 100 parts epoxy resin base and (B) 1-50 parts A-B block copolymers having a segment A derived from Me acrylate and a segment B derived from ethylenic unsatd. monomers and average particle diameter of 0.001-200  $\mu\text{m}$ , as particles dispersed in the resin base for lowering stress of cured products. Thus, preparing a block copolymer with  $T_g$  -50° and  $M_w$  53,000 and having a segment derived from Me acrylate and a segment derived from 2-ethylhexyl acrylate by a 2-step polymerization using

a polymeric peroxide as initiator, mixing 20 parts this copolymer with Epikote 828 100, dicyandiamide 10, an accelerator 0.5 and  $\text{CaCO}_3$  30 parts gave an adhesive which was cured at 150° for 1 h to give a cured product with tensile shear bonding strength 21 MPa, flexural strength 48 MPa, T-type release adhesive strength 48 N/25 mm, and moisture absorption 2.3%.

IC ICM C08L063-00

ICS C08F293-00; C08L063-00; C08L053-00

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 42

IT 25053-96-7DP, o-Cresol-formaldehyde copolymer, glycidyl ethers 25068-38-6DP, Bisphenol A-epichlorohydrin copolymer, crosslinked with polyamidoamine 27754-24-1P, Bisphenol A-dicyandiamide-epichlorohydrin copolymer 96141-20-7P, Epiclon 830LVP 115180-61-5P, Butyl acrylate-methyl acrylate block copolymer 157232-74-1P 386706-42-9P, 2-Ethylhexyl acrylate-methyl acrylate block copolymer 386706-43-0P 386706-44-1DP, trimethylsilyl ether 386706-45-2P, Divinylbenzene-2-

ethylhexyl acrylate-methyl acrylate block copolymer 386706-46-3P  
, Ethyl acrylate-2-ethylhexyl acrylate-methyl acrylate block  
copolymer 386706-47-4P, 2-Ethylhexyl acrylate-glycidyl  
methacrylate-methyl acrylate block copolymer 386706-48-5P,  
2-Ethylhexyl acrylate-methacrylic acid-methyl acrylate block  
copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)

(low-stress and low-moisture-absorption epoxy resin compns., manufacture and  
cured products)

IT 386706-46-3P, Ethyl acrylate-2-ethylhexyl acrylate-methyl acrylate  
block copolymer 386706-48-5P, 2-Ethylhexyl

acrylate-methacrylic acid-methyl acrylate block copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)

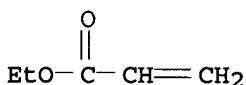
(low-stress and low-moisture-absorption epoxy resin compns., manufacture and  
cured products)

RN 386706-46-3 HCPLUS

CN 2-Propenoic acid, ethyl ester, polymer with 2-ethylhexyl 2-propenoate and  
methyl 2-propenoate, block (9CI) (CA INDEX NAME)

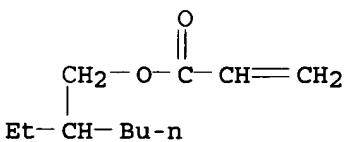
CM 1

CRN 140-88-5  
CMF C5 H8 O2



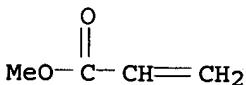
CM 2

CRN 103-11-7  
CMF C11 H20 O2



CM 3

CRN 96-33-3  
CMF C4 H6 O2



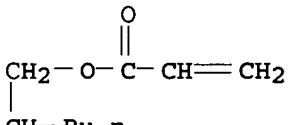
RN 386706-48-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethylhexyl 2-propenoate and  
methyl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 103-11-7

CMF C11 H20 O2



CM 2

CRN 96-33-3

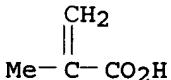
CMF C4 H6 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



L73 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:805317 HCAPLUS

DN 135:358833

TI Reactive vinyl block copolymers and curable compositions thereof

IN Kakei, Takama; Wakiya, Takeshi

PA Sekisui Chemical Co. Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001310920	A2	20011106	JP 2000-130292	20000428
PRAI	JP 2000-130292		20000428		
AB	Block copolymers comprise $\geq 1$ group of a block having glass transition temperature ( $T_g$ ) $< 20^\circ$ and a block having $T_g > 20^\circ$ higher than the former. Thus, 2-ethylhexyl				

acrylate-Me methacrylate block copolymer having OH terminal groups added by ethylene oxide was prepared, mixed with Coronate L at NCO-OH ratio 1.2 and dibutyltin dilaurate, coated on a corona-treated polyester film, and heated to prepare an adhesive sheet.

IC ICM C08F297-00

ICS C08F290-04; C08G018-63; C08G059-40; C08G077-442; C08G081-02;  
C08K003-36; C08K005-17; C08K005-3412; C08K005-541; C08L053-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s) : 42

IT 372119-62-5P 372119-63-6P 372119-64-7P 372119-65-8P

372119-66-9P 372119-67-0P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(reactive vinyl block copolymers and curable compns. thereof)

IT 372119-66-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reactive vinyl block copolymers and curable compns. thereof)

RN

372115-88-9 RCAF005  
3-Bromopropionic acid, 3-

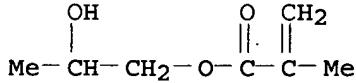
CN

2-ethylhexyl 2-propenoate and methyl 2-methyl-2-propenoate, block (9CI)  
(CA INDEX NAME)

CM 1

CRN 923-26-2

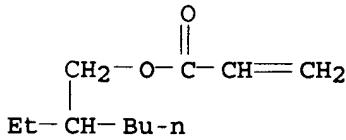
CMF C7 H12 O3



CM 2

CRN 103-11-7

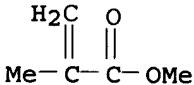
CMF C11 H20 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



L73 ANSWER 15 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2001:767398 HCPLUS  
 DN 135:325273

TI Image receiving sheet with aqueous ink receiving layer, its manufacturing method, and image formation using it

IN Matsui, Izuru

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001293944	A2	20011023	JP 2000-108953	20000411
PRAI JP 2000-108953		20000411		

AB The medium has, on  $\geq 1$  side of a support, the layer containing a graft or a block copolymer comprising a hydrophilic and a hydrophobic segment whose glass transition temperature is from -100 to

50°. The method consists of processes of (1) manufacturing the above graft or block copolymer, (2) manufacturing a solution containing the copolymer, and

(3) coating the solution for forming the layer containing the copolymer on  $\geq 1$  side of the support. Images are formed with an aqueous ink on the layer. The medium showed improved anti-blocking, traveling properties, storage stability, and adhesion between the layer and the support, preventing stripping of the layer, humidity effect, and curling.

IC ICM B41M005-00

ICS B41M005-00; B41J002-01

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s) : 38

IT 367452-68-4P 367452-69-5P 367452-70-8P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(ink-jet printing sheet containing block or graft copolymer comprising hydrophilic and hydrophobic segments)

IT 367452-68-4P 367452-69-5P 367452-70-8P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(ink-jet printing sheet containing block or graft copolymer comprising hydrophilic and hydrophobic segments)

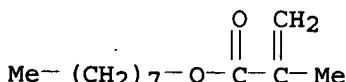
RN 367452-68-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenyl acetate and octyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 2157-01-9

CMF C12 H22 O2



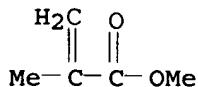
CM 2

CRN 108-05-4  
CMF C4 H6 O2



CM 3

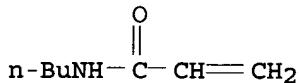
CRN 80-62-6  
CMF C5 H8 O2



RN 367452-69-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
N-butyl-2-propenamide and octyl 2-methyl-2-propenoate, graft (9CI) (CA  
INDEX NAME)

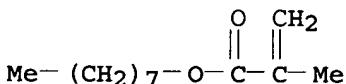
CM 1

CRN 2565-18-6  
CMF C7 H13 N O



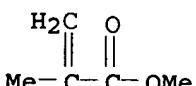
CM 2

CRN 2157-01-9  
CMF C12 H22 O2



CM 3

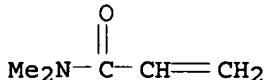
CRN 80-62-6  
CMF C5 H8 O2



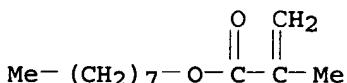
RN 367452-70-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
N,N-dimethyl-2-propenamide and octyl 2-methyl-2-propenoate, graft (9CI)  
(CA INDEX NAME)

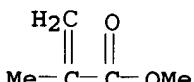
CM 1

CRN 2680-03-7  
CMF C5 H9 N O

CM 2

CRN 2157-01-9  
CMF C12 H22 O2

CM 3

CRN 80-62-6  
CMF C5 H8 O2

L73 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:384305 HCAPLUS

DN 133:18330

TI Methacrylate-siloxane block copolymer-containing elastomer compositions as  
impact modifiers and their thermoplastic resin compositions

IN Kimura, Katsuhiko; Aoyama, Taizo

PA Kaneka Corporation, Japan

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

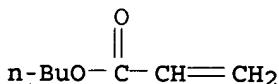
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000032690	A1	20000608	WO 1999-JP6672	19991130
	W: CN, JP, KR, US				
	RW: BE, DE, FR, GB, IT, NL				
EP	1179566	A1	20020213	EP 1999-973049	19991130
	R: BE, DE, FR, GB, IT, NL				

US 6534594 B1 20030318 US 2001-831923 20010529  
 PRAI JP 1998-344601 A 19981203  
 WO 1999-JP6672 W 19991130

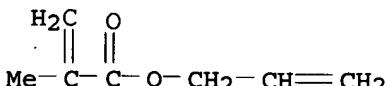
AB Title compns. comprise 1-99% title block copolymers and 1-99% graft copolymers consisting of components with glass-transition temperature ( $T_g$ ) of  $<25^\circ$  and components with  $T_g$  of  $\geq 25^\circ$ . Reacting 2-(4'-chloromethylphenyl)ethyldimethylsilyl-terminated polydimethylsiloxane gave a chloromethylphenyl-terminated polydimethylsiloxane, which was polymerized with Me methacrylate to form a block copolymer (I). A Kanevinyl S 1008-based composition was mixed with 12% (based on 100 parts S 1008) 5:95 I and FM 21 blend and molded into a sheet with Izod impact strength 96 kg-cm/cm.

IC ICM C08L053-00  
 ICS C08L051-00; C08L083-04; C08L101-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 IT 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-02-9P, Allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); POF (Polymer in formulation); PRP (Properties); PREP (Preparation);  
 USES (Uses)  
 (methacrylate-siloxane block copolymer and acrylic graft polymer blends as impact modifiers for thermoplastics)  
 IT 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); POF (Polymer in formulation); PRP (Properties); PREP (Preparation);  
 USES (Uses)  
 (methacrylate-siloxane block copolymer and acrylic graft polymer blends as impact modifiers for thermoplastics)  
 RN 107052-86-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

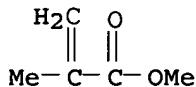
CRN 141-32-2  
CMF C7 H12 O2

CM 2

CRN 96-05-9  
CMF C7 H10 O2

CM 3

CRN 80-62-6  
 CMF C5 H8 O2



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:34606 HCAPLUS  
 DN 132:93812  
 TI Hydrogenated diene-acrylate block copolymer and polymer composition  
 IN Kitayama, Koji; Hamada, Kenichi; Akai, Makoto; Ishiura, Kazushige  
 PA Kuraray Co., Ltd., Japan  
 SO Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 970979	A1	20000112	EP 1999-112744	19990701
	EP 970979	B1	20030226		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2276568	AA	20000103	CA 1999-2276568	19990629
	JP 2000080136	A2	20000321	JP 1999-183425	19990629
	US 6228946	B1	20010508	US 1999-343519	19990630
PRAI	JP 1998-204311	A	19980703		
AB	A block copolymer comprises, in a main chain thereof, at least one polymer block A, at least one polymer block B and at least one polymer block C, the polymer block A being obtained by hydrogenation of at least 80% of unsatd. bonds of a butadiene-based polymer block having a 1,2-bond content less than 20% and having crystallinity; the polymer block B having a glass transition point not higher than 20°; and the polymer block C being composed mainly of a methacrylate ester unit and/or an acrylate ester unit and having a glass transition point exceeding 20°. A block copolymer was prepared by polymerization of butadiene, isoprene, and Me methacrylate and hydrogenation of the resulting polymer.				
IC	ICM C08F297-02 ICS C08L053-00				
CC	35-4 (Chemistry of Synthetic High Polymers)				
IT	106399-43-3DP, Butadiene methyl methacrylate block copolymer, hydrogenated 154425-44-2DP, Butadiene-isoprene-methyl methacrylate block copolymer, hydrogenated				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (hydrogenated diene-acrylate block copolymer and polymer composition)				
IT	154425-44-2DP, Butadiene-isoprene-methyl methacrylate block copolymer, hydrogenated				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES				

## (Uses)

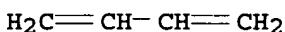
(hydrogenated diene-acrylate block copolymer and polymer composition)

RN 154425-44-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and 2-methyl-1,3-butadiene, block (9CI) (CA INDEX NAME)

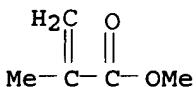
CM 1

CRN 106-99-0  
CMF C4 H6



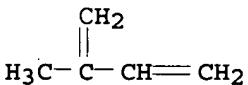
CM 2

CRN 80-62-6  
CMF C5 H8 O2



CM 3

CRN 78-79-5  
CMF C5 H8



RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 18 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1998:752640 HCPLUS

DN 130:125495

TI Dendrimer-like Star Block and Amphiphilic Copolymers by Combination of Ring Opening and Atom Transfer Radical Polymerization

AU Hedrick, J. L.; Trollss, M.; Hawker, C. J.; Atthoff, B.; Claesson, H.; Heise, A.; Miller, R. D.; Mecerreyes, D.; Jerome, R.; Dubois, Ph.

CS IBM Research Division, Almaden Research Center, San Jose, CA, 95120-6099, USA

SO Macromolecules (1998), 31(25), 8691-8705  
CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB A new type of macromol. architecture, denoted as dendrimer-like star block copolymers, is reported. These block copolymers are described by a radial geometry where the different generations or layers comprise a high mol.

weight polymer emanating from a central core. A hexahydroxyl functional core was used as an initiator for the living ring opening polymerization (ROP) of  $\epsilon$ -caprolactone producing a hydroxyl terminated 6-arm star polymer with controlled mol. weight and narrow polydispersities (PD < 1.1). Capping these chain ends with dendrons containing activated bromide moieties produced macro-initiators for atom transfer radical polymerization (ATRP). Me methacrylate was polymerized from these macro-initiators in the presence of an organometallic promoter to produce the requisite dendrimer-like star polymers. High mol. weight was obtained with low polydispersities (<1.2). Alternatively, amphiphilic character could be introduced by designing the different layers or generations to be either hydrophobic or hydrophilic. For example, Me methacrylate (MMA) with either hydroxyethyl methacrylate (HEMA) or methacrylate functional ethylene oxide macromonomers (EO) were polymerized from these macro-initiators to provide a hydrophilic outer layer. The use of macromol. building blocks allows rapid attainment of high polymer in a limited number of steps with purification between transformation requiring only polymer precipitation

CC 35-8 (Chemistry of Synthetic High Polymers)

IT Glass transition temperature

NMR (nuclear magnetic resonance)

Size-exclusion chromatography

(dendrimer-like star block and amphiphilic copolymers by combination of ring opening and atom transfer radical polymerization)

IT 108167-68-6P,  $\epsilon$ -Caprolactone-methyl methacrylate block copolymer

219754-53-7P 219794-70-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(6-arm star dendritic; dendrimer-like star block and amphiphilic copolymers by combination of ring opening and atom transfer radical polymerization)

IT 219794-70-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(6-arm star dendritic; dendrimer-like star block and amphiphilic copolymers by combination of ring opening and atom transfer radical polymerization)

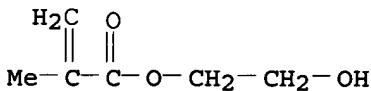
RN 219794-70-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-oxepanone, block (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

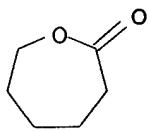
CMF C6 H10 O3



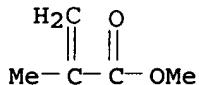
CM 2

CRN 502-44-3

CMF C6 H10 O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2RE.CNT 106 THERE ARE 106 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 19 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 1997:631718 HCPLUS  
 DN 127:248487  
 TI Poly[poly(isobornyl methacrylate-co-methyl methacrylate)  
 (poly(IBMA-co-MMA))-b-polybutadiene-b-poly(IBMA-co-MMA)] Copolymers:  
 Synthesis, Morphology, and Properties  
 AU Yu, J. M.; Dubois, Ph.; Jerome, R.  
 CS Center for Education and Research on Macromolecules, University of Liege,  
 Liege, 4000, Belg.  
 SO Macromolecules (1997), 30(21), 6536-6543  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB Anionic random and block copolymn. of isobornyl methacrylate (IBMA) and Me  
 methacrylate (MMA) has been studied in THF at -78 °C by using  
 (1,1-diphenyl-3,3-dimethylbutyl)lithium (DDBLi) as initiator in the  
 presence of LiCl. The random copolymn. of MMA and IBMA has also been  
 carried out at 0 °C, all the other conditions being kept unchanged.  
 Poly[poly(IBMA)-b-poly(BD)-b-poly(IBMA)] (IBI), poly[poly(IBMA-co-MMA)-b-  
 poly(BD)-b-poly(MMA-co-IBMA)] (I/MBM/I), and poly[poly(IBMA)-b-poly(MMA)-b-  
 poly(BD)-b-poly(MMA)-b-poly(IBMA)] (IMBMI) block copolymers have been  
 synthesized by sequential anionic polymerization of butadiene, MMA, and IBMA  
 initiated by the m-diisopropenylbenzene (m-DIB)/tert-butyllithium (t-BuLi)  
 diadduct. These block copolymers of a monomodal and narrow mol. weight  
 distribution (.hivin.Mw/.hivin.Mn = 1.1) have been analyzed by size  
 exclusion chromatog. (SEC), NMR, differential scanning calorimetry (DSC),  
 dynamic mech. anal. (DMA), and transmission electron microscopy (TEM).  
 Stereocomplexation of IMBMI and I/MBM/I with iPMMA has also been studied  
 by DSC. Although IBI triblock copolymers show a lamellar morphol. even  
 for relatively low hard block content (33 wt %), cylindrical and lamellar  
 morphologies have been observed for the other block copolymers under  
 consideration. These new block copolymers exhibit high ultimate tensile  
 strength (30 MPa), elongation at break (1000%), and upper service temperature  
 (140-200 °C).  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 36

IT Glass transition temperature  
 Mechanical loss  
 Polymer morphology  
 Stress-strain relationship  
 Stress-strain relationship  
 Tensile strength  
 (synthesis, morphol. and mech. properties of random and block isobornyl methacrylate-Me methacrylate copolymers and multiblock butadiene-isobornyl methacrylate-Me methacrylate copolymers)

IT 186753-02-6P, Butadiene-isobornyl methacrylate-methyl methacrylate block copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (multiblock; synthesis, morphol. and mech. properties of random and block isobornyl methacrylate-Me methacrylate copolymers and multiblock butadiene-isobornyl methacrylate-Me methacrylate copolymers)

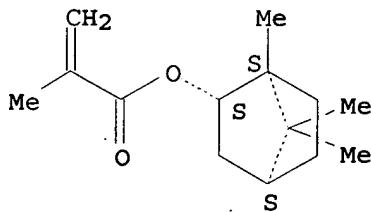
IT 186753-02-6P, Butadiene-isobornyl methacrylate-methyl methacrylate block copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (multiblock; synthesis, morphol. and mech. properties of random and block isobornyl methacrylate-Me methacrylate copolymers and multiblock butadiene-isobornyl methacrylate-Me methacrylate copolymers)

RN 186753-02-6 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

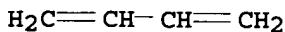
CM 1

CRN 7534-94-3  
 CMF C14 H22 O2

Relative stereochemistry.

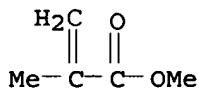


CM 2

CRN 106-99-0  
 CMF C4 H6

CM 3

CRN 80-62-6  
 CMF C5 H8 O2



RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 20 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1997:191572 HCPLUS

DN 126:192979

TI Active energy ray-curing resin composition

IN Okuo, Masami; Higuchi, Yoshiki; Oomura, Hiroshi; Suyama, Shuji

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08339084	A2	19961224	JP 1995-168030	19950609
PRAI JP 1995-168030		19950609		

AB The title composition contains (A) a block copolymer having acid group-containing

hydrophilic segments and hydrophobic segments, in which the glass transition temperature ( $T_g$ ) of the hydrophobic segments is  $\geq -5^\circ$  and the  $T_g$  of the hydrophilic or hydrophobic segments is  $\leq 80^\circ$ , (B) a monomer which polymerizes by irradiation with active energy rays, and (C) a polymerization initiator. The composition easily

developable with alkaline aqueous solns. shows high sensitivity toward active energy rays and provides a nontacky film, and the cured resin exhibits good alkali- and chemical resistance. Thus, an active energy ray-curing resin composition was prepared by using Bu methacrylate-methacrylic acid-maleic anhydride-styrene block copolymer ( $T_g$ s of hydrophilic and hydrophobic segments are 80 and  $21^\circ$ , resp.), TMP-6EO-3A (trimethylolpropane triacrylate-ethylene oxide adduct), and Irgacure 907 (photopolymn. initiator).

IC ICM G03F007-038

ICS G03F007-00; G03F007-027; G03F007-028; G03F007-033; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 187404-98-4P, Butyl methacrylate-maleic anhydride-methacrylic acid-styrene block copolymer 187404-99-5P, Ethyl acrylate-hydroxyphenylmaleimide-methyl methacrylate-styrene block copolymer 187405-00-1P 187405-01-2P, Butyl acrylate-butyl methacrylate-methyl methacrylate-polyethylene glycol methyl ether methacrylate-sulfoethylmethacrylate mono-2-methacryloyloxyethyl acid phosphate block copolymer 187405-02-3P, Butyl methacrylate-methyl methacrylate-polyethylene glycol methyl ether methacrylate block copolymer

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(active energy ray-curing resin composition containing block copolymer and monomer)

IT 187405-02-3P, Butyl methacrylate-methyl methacrylate-polyethylene glycol methyl ether methacrylate block copolymer

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or



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PI WO 9700292 A1 19970103 WO 1996-GB1381 19960610  
 W: AU, BR, CA, CN, CZ, HU, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SK,  
 TR, UA, US, VN  
 RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
 EP 832158 A1 19980401 EP 1996-917577 19960610  
 EP 832158 B1 19991201  
 R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE  
 CN 1187835 A 19980715 CN 1996-194747 19960610  
 CN 1070520 B 20010905  
 JP 11507686 T2 19990706 JP 1997-502781 19960610  
 AT 187190 E 19991215 AT 1996-917577 19960610  
 AU 9660105 A1 19970115 AU 1996-60105 19960612  
 US 5994446 A 19991130 US 1998-981167 19980325

PRAI GB 1995-12125 A 19950615  
 GB 1996-8748 A 19960426  
 WO 1996-GB1381 W 19960610

AB Title copolymers having number average mol. weight (Mn)  $\geq$  50,000, preferably with poly(Me methacrylate) end blocks and butadiene or ethylene/butylene mid-block, have higher glass transition temps. than known styrene-alkylene-styrene triblock gels. Addnl. copolymers have end blocks of higher alkyl (e.g. isobornyl) methacrylate homopolymer or copolymers and can contain styrene blocks. Mixed methyl- and higher alkyl-methacrylate end blocks reduce gel-formation problems which may arise from the solubility parameter of isobornyl methacrylate homopolymer end blocks being too close to that of the extender oil. Thus, a hydrogenated Me methacrylate-butadiene-Me methacrylate triblock copolymer (Mn of blocks 13,000, 69,000, 13,000, resp.) was dissolved in toluene, mixed with Fina A 360B oil, and the solvent removed, giving a gel having tensile strength 33 kPa, elongation at break 559%, and softening point 172°.

IC ICM C08L053-00  
 ICS C08K005-00

CC 39-4 (Synthetic Elastomers and Natural Rubber)  
 Section cross-reference(s): 35

IT 106399-43-3DP, Butadiene-methyl methacrylate block copolymer, hydrogenated  
 110302-49-3DP, hydrogenated 186753-02-6DP, hydrogenated  
 821786-89-4DP, hydrogenated 827030-22-8DP, hydrogenated  
 837389-85-2DP, hydrogenated  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process)  
 (triblock, rubber; gels of oil-extended methacrylate-alkylene-methacrylate multiblock copolymers)

IT 167946-15-8P, Butadiene-isobornyl methacrylate block copolymer  
 184295-33-8P 186753-02-6P 837365-59-0P 837387-38-9P  
 837389-85-2P  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (triblock, rubber; preparation for oil-extended gels)

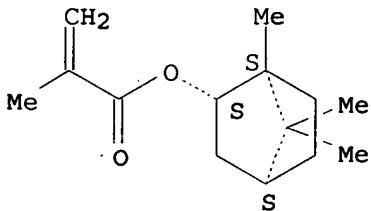
IT 186753-02-6DP, hydrogenated 837389-85-2DP, hydrogenated  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process)  
 (triblock, rubber; gels of oil-extended methacrylate-alkylene-methacrylate multiblock copolymers)

RN 186753-02-6 HCAPLUS

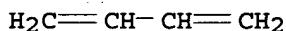
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CRN 7534-94-3  
CMF C14 H22 O2

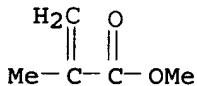
Relative stereochemistry.



CM 2

CRN 106-99-0  
CMF C4 H6

CM 3

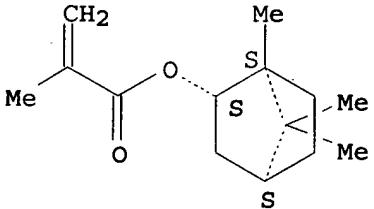
CRN 80-62-6  
CMF C5 H8 O2

RN 837389-85-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and  
 rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-  
 propenoate, triblock (9CI) (CA INDEX NAME)

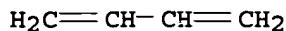
CM 1

CRN 7534-94-3  
CMF C14 H22 O2

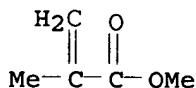
Relative stereochemistry.



CM 2

CRN 106-99-0  
CMF C4 H6

CM 3

CRN 80-62-6  
CMF C5 H8 O2

IT 186753-02-6P 837389-85-2P

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
(triblock, rubber; preparation for oil-extended gels)

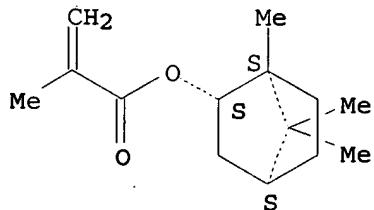
RN 186753-02-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and  
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, block  
(9CI) (CA INDEX NAME)

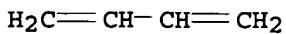
CM 1

CRN 7534-94-3  
CMF C14 H22 O2

Relative stereochemistry.

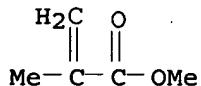


CM 2

CRN 106-99-0  
CMF C4 H6

CM 3

CRN 80-62-6  
 CMF C5 H8 O2

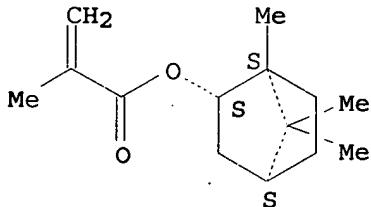


RN 837389-85-2 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and  
 rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-  
 propenoate, triblock (9CI) (CA INDEX NAME)

CM 1

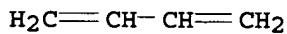
CRN 7534-94-3  
 CMF C14 H22 O2

Relative stereochemistry.



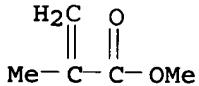
CM 2

CRN 106-99-0  
 CMF C4 H6



CM 3

CRN 80-62-6  
 CMF C5 H8 O2



L73 ANSWER 22 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 1996:583572 HCPLUS  
 DN 125:196749  
 TI Manufacture of thermoplastic star-block addition polymers showing good  
 vibration-damping property and adhesion  
 IN Yoshida, Masatoshi; Kobayashi, Nobuhiro

PA Nippon Catalytic Chem Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08188631	A2	19960723	JP 1995-2848	19950111
	JP 2934586	B2	19990816		
PRAI	JP 1995-2848		19950111		

AB The polymers comprises (1) polymer assemblies consisting of (A) multivalent mercaptan components and (B) several copolymer components of  $\geq 2$  polymerizable unsatd. monomer units radially elongated from the mercaptan components, in which the compns. of the copolymer components are gradually changed in the whole assemblies or (2)  $\geq 2$  polymerizable unsatd. monomer units and shows Mn 4000-1,000,000, parallel light transmittance  $\geq 85\%$ , and one Tg peak with  $\geq 50^\circ$  deviation. The polymers are manufactured by (1) mixing polymerizable unsatd. monomers and multivalent mercaptans, (2) slowly adding other polymerizable unsatd. monomers to the mixts., and (3) radically polymerizing these monomers from mercapto groups of the mercaptanes as starting points. Thus, Me methacrylate 285, acrylic acid (I) 15, and pentaerythritol tetrakis(thioglycolate) 5 parts were heated at 80° for 30 min in 300 parts BuOAc containing 0.1 part AIBN, followed by dropping a mixture of 665 parts Bu acrylate and 35 parts I for 4 h and treating for 1 h to give a polymer with (Mn) 95.5 + 104, parallel light transmittance 90.5%, and S content 0.15%, which was dissolved in Bu acetate and applied on a PET film to give a transparent adhesive tape with adhesive strength to a SUS plate 1800 kg/cm<sup>2</sup>.

IC ICM C08F297-02

CC 35-4 (Chemistry of Synthetic High Polymers)

ST thermoplastic addn copolymer star block; mercaptan unsatd monomer radical polymn block; parallel light transmittance thermoplastic addn polymer; glass transition temp thermoplastic addn polymer; adhesive tape thermoplastic star block copolymer; vibration damper thermoplastic star block polymer

IT 106911-77-7P, Methyl methacrylate-styrene block copolymer 156515-20-7P  
167936-22-3PRL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(star-block; manufacture of thermoplastic star-block addition polymers)

IT 167936-22-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(star-block; manufacture of thermoplastic star-block addition polymers)

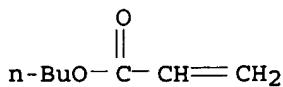
RN 167936-22-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

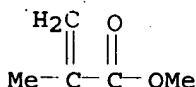
CM 1

CRN 141-32-2

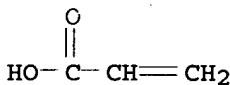
CMF C7 H12 O2



CM 2

CRN 80-62-6  
CMF C5 H8 O2

CM 3

CRN 79-10-7  
CMF C3 H4 O2

L73 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1995:792794 HCAPLUS  
 DN 123:199743  
 TI Block polymer, thermoplastic addition polymer, production process, and use  
 IN Yoshida, Masatoshi; Kobayashi, Nobuhiro; Hasegawa, Hiroaki  
 PA Nippon Shokubai Co., Ltd., Japan  
 SO PCT Int. Appl., 157 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518162	A1	19950706	WO 1994-JP2198	19941222
	W: CN, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP	07179538	A2	19950718	JP 1993-328954	19931224
JP	2842782	B2	19990106		
JP	08165462	A2	19960625	JP 1994-309189	19941213
JP	3377315	B2	20030217		
JP	2000303048	A2	20001031	JP 2000-69536	19941213
JP	3534340	B2	20040607		
JP	08176519	A2	19960709	JP 1994-318630	19941221
EP	686653	A1	19951213	EP 1995-903944	19941222
EP	686653	B1	19990818		
	R: BE, DE, FR, GB, IT, NL				
CN	1118167	A	19960306	CN 1994-191285	19941222
CN	1077900	B	20020116		
US	5679762	A	19971021	US 1995-507243	19950818

US 5869598	A	19990209	US 1997-872212	19970610
PRAI JP 1993-328954	A	19931224		
JP 1994-309189	A	19941213		
JP 1994-318630	A	19941221		
WO 1994-JP2198	W	19941222		
US 1995-507243	A3	19950818		

AB The title polymer useful in various applications including hot-melt resin composition, pressure-sensitive adhesive and support for pressure-sensitive adhesive has a configuration comprising a polyvalent mercaptan unit as the center and a number of polymer segments projecting therefrom radially, and has Mn 2,000-1,000,000. The polymer segments have at least two different compns. The block polymer is produced by at least two-stage free-radical polymerization of various polymerizable monomer components having different compns. by using a polyvalent mercaptan as the polymerization initiator.

**Styrene**

was polymerized in the presence of pentaerythritol tetrakis(thioglycolate) to obtain a radial polymer, then Bu acrylate and acrylic acid were polymerized in the above polymerization mixture to obtain a resilient block copolymer with Mn 39,000, mol. weight distribution 8.1, and  $T_g$  -35° and +90°.

IC ICM C08F293-00

ICS C09J153-00; C08L053-00; C08G075-14; C09J201-00; C09J201-02; C09J133-06

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 106911-77-7P, Methyl methacrylate-styrene block copolymer 108146-73-2P,

Acrylonitrile-butadiene-styrene block copolymer 131830-42-7P

167770-42-5P 167770-43-6P 167770-44-7P 167770-45-8P 167770-46-9P

167770-47-0P 167770-48-1P 167936-22-3P 167936-23-4P

167936-24-5P 168146-34-7P

RL: IMF (Industrial manufacture); PRP (Properties); PREP

(Preparation)

(block polymer, thermoplastic addition polymer, production process, and use)

IT 167936-22-3P

RL: IMF (Industrial manufacture); PRP (Properties); PREP

(Preparation)

(block polymer, thermoplastic addition polymer, production process, and use)

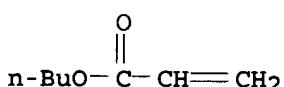
RN 167936-22-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

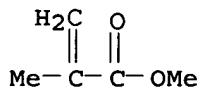
CMF C7 H12 O2



CM 2

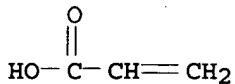
CRN 80-62-6

CMF C5 H8 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2



L73 ANSWER 24 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1985:579127 HCAPLUS

DN 103:179127

## TI Radial block polymers

IN Dean, Barry P.

IN bean, Barry,  
PA Atlantic Ri

SO U.S., 9 pp.

STBY,  
CODEN:

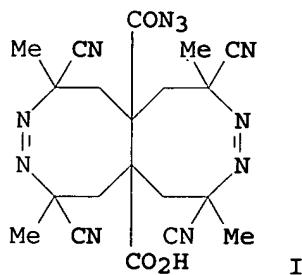
DT Patent

LA Eng1

FAN.CNT 1

PATENT NO.		KIND	DATE
PI	US 4532301	A	19850730
	JP 61113609	A2	19860531
	JP 06017379	B4	19940309
	EP 182527	A1	19860528
	EP 182527	B1	19890426

LI 182527 BI 19890426  
R: BE, DE, FR, GB, IT, NL  
PRAI US 1984-668060 A 19841105  
GI



AB The title polymers having  $\geq 4$  arms are prepared using bis azo compound I [99007-70-2] as polymerization initiator. Five-arm radial block copolymers are suitable for use as impact modifiers for thermoformable plastics. Thus, I was prepared by Diels-Alder reaction of acetylenedicarboxylic acid [142-45-0] with 2,3-dimethyl-1,3-butadiene [513-81-5], Lemieux-Von Rudloff oxidation of the adduct [93164-14-8], treatment of the oxidized

adduct [99007-67-7] with NaCN and H<sub>2</sub>NNH<sub>2</sub>.H<sub>2</sub>SO<sub>4</sub> to give a cyano-substituted bicyclic dihydrazine [99007-68-8], which was oxidized with Br to the bis azo derivative [99007-69-9] and converted to the monoazide. I (43.46 g) was condensed with 50 g OH-terminated poly(Me methacrylate) at 60° for 12 h in dry PhCl, and then with 165 g Bu acrylate and 75 g Et acrylate in 600 g AcOEt at 85° for 72 h to give a radial block copolymer (II) [25767-43-5] having 5 arms and glass-transition temperature 73° [poly(Me methacrylate)] and -29° (Bu acrylate-Et acrylate copolymer). A blend of Dylark 332 (maleic anhydride-styrene copolymer) [9011-13-6] 800, II 200, Ultranox 256 (antioxidant) 2.0, and Ultranox 626 (antioxidant) 1.5 g was extruded, pelletized, and injection-molded into a test piece with notched Izod impact strength (ASTM D-256) 4.2 ft-lb/in., compared with 0.5 ft-lb/in. without II.

IC ICM C08F293-00

INCL 525280000

CC 37-3 (Plastics Manufacture and Processing)

IT 25767-43-5P 98972-14-6P

## RL: PREP (Preparation)

(radial block, five-arm, impact modifier, preparation of, using bicyclic disazo initiator)

IT 25767-43-5P

## RL: PREP (Preparation)

(radial block, five-arm, impact modifier, preparation of, using bicyclic disazo initiator)

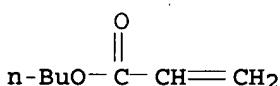
RN 25767-43-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

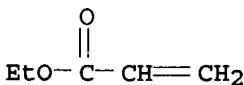
CMF C7 H12 O2



CM 2

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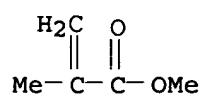
CMF C5 H8 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



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